MOBILIZING SOCIAL CAPITAL: AN EXPLORATION INTO THE USE OF A MENTORSHIP INTERVENTION TO ENHANCE SOCIAL CAPITAL FOR FIRST-GENERATION COLLEGE STUDENTS

by
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Abstract

Internships are helpful tools for college students to gain valuable work experience that increases their employability. While applying online is an option, the best inroads into internships are through personal connections made available through social capital. First-generation college students who have limited networks may lack the social capital that provide internship connections. Using Nan Lin's (1999) network model of social capital as a theoretical framework, the paper reviews intervention literature and presents the findings from an implemented intervention. The mentorship intervention focused on two points of impact, the preconditions and mobilization of social capital for its three first-generation college student participants. To address the preconditions of social capital, the study trained the student participants on networking skills and the value of social capital. To address the mobilization of social capital, each student participant was paired with one career-relevant alumni mentor participant for a mentoring relationship that created connections. The convergent mixed method, quasi-experimental, single group designed study leveraged three data collection methods: a pre/post-test, mentor/mentee journal reflections, and focus group. Though the small sample size limited the ability for comparative analysis of study data, the student mentees experienced several benefits of mentorship including: career advice, career insight, and help. Additionally, and critically important, the mentorship relationships increased the number of contacts for each study participant, ultimately enhancing their social capital. The study provides implications for practice within high school and higher education settings to create resources, programming, and instruction that supports first-generation colleges students in building social capital.

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Keywords: First-generation college student, social capital, mentoring, internships

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Dedication

This dissertation is dedicated to my mother, best friend, and heavenly angel, Lenora Hayes. Your commitment to service and love for others still inspires me today. I love you.

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Executive Summary

Education has previously been called “the great equalizer of men” (Growe & Montgomery, 2003, p.23). As such, obtaining a college degree has been viewed as the key to accessing well-paying jobs and successful careers (Jez, 2014). This is particularly the case for first-generation college students or those who are the first in their family to go to college (National Center for Education Statistics, Cataldi, Bennett, & Chen, 2018). With time, however, having a college degree is no longer the barometer for success. Employers increasingly look for students to have internship experience (NACE, 2018; Townsley, Lierman, Watermill, & Rousseau, 2017).

While finding internship opportunities through online listings is one method to gain these valuable experiences (NACE, 2017), leveraging connections and networks is ideal. Using connections and relationships provides more visibility to unlisted opportunities (McDonald, 2011) and allows some students to circumvent the application process altogether (Boulton, 2015; Neidorf, 2008). Continuing education students, or those whose families are college-educated, benefit from their social networks through career information, opportunities, and resources (Martin, Miller, & Simmons, 2014).

The relationship between these resources and connections is defined as social capital (Bourdieu, 2008). Possessing social capital enhances the likelihood of gaining quality employment, better pay, and more (Lin, 2000). Exploring the relationship between social capital and first-generation college students is of particular concern due to the importance of connecting these students to internships and other helpful resources. As internships become increasingly crucial to college students' employability, first-

generation college students' lack of access to social capital that opens doors to internships may impact their post-graduate career success.

A Theoretical Framework to Exploring Social Capital

Using Lin's (1999) network model for social capital, the purpose of this research was to explore the ability to mobilize social capital for first-generation college students. The model has three major blocks or components, including the preconditions or precursors of social capital, social capital elements, and the possible returns for social capital (Lin, 1999). The first block, or preconditions of social capital, includes collective assets and an individual's position in the social structure (Häuberer, 2011; Lin, 1999). Collective assets consist of the possessions of an individual or group such as economy, technology, and social/political or cultural participation (Lin, 1999). Structural elements or positions are the construction and form of a network (Lin, 1999). The components in the first block, or preconditions of social capital, affect opportunities to build or preserve social capital (Häuberer, 2011; Lin, 1999).

Inequality of social capital occurs in the model when transitioning from the first to the second block (Lin, 1999). This inequality is a result of the unequal distribution of access to social capital due to an individual's position within the social structure (Häuberer, 2011; Lin, 1999). The second block incorporates social capital elements, including the access to social resources and the mobilization, or use, of social resources through contacts or the resources of contacts (Häuberer, 2011; Lin, 1999). The mobilization of social capital resources occurs when access to social capital connects with the use of social capital for a return (Lin, 1999).

The third block in the model includes the two types of outcomes that result from mobilizing social capital, instrumental returns, and expressive returns (Lin, 1999). Instrumental returns are new resources an individual receives from mobilizing social capital, such as wealth, reputation, and power (Lin, 1999). Expressive returns already exist for the individual and include physical or mental health, and life satisfaction (Lin, 1999).

A literature review through the lens of Lin's (1999) network model of social capital revealed key components associated with social capital and first-generation college students. Cultural capital was identified as a contributing factor to the inequality of social capital. Specifically, because cultural capital is primarily determined by the dominant culture (Thompson et al., 2016), first-generation college students who may have limited exposure to dominate culture have fewer collective assets (Lin, 1999; Thompson et al., 2016). Another critical concept revealed in the literature was the use of bridging vs. bonding to build social capital (Clemens, 2016). Bridging is the connection between heterogeneous networks, where bonding is the connection in homogenous networks (Clemens, 2016). First-generation college students who can participate in bridging can connect to diversified resources found in heterogeneous networks (Clemens, 2016; Lin, Ensel, & Vaughn, 1981).

Needs Assessment

To gain further understanding about the first-generation college students on the BJU campus, an empirical needs assessment was used to determine the students' access to social capital and the high school experiences that taught them skills to build social capital. Using purposeful sampling, 13 undergraduate first-generation college students

enrolled at the university, were recruited and completed the survey. The survey assessed the quantity, value, and access to resources within the students' networks. Additionally, the instrument assessed the students' exposure to academic and high school resources and their awareness of cultural capital.

The needs assessment findings revealed that students were closest to and could get help from their immediate family, friends, and relatives; however, these groups had limited assets to share with them. Specifically, these networks had no or very few broad connections or professional jobs, two factors integral to robust social capital (Behtoui, 2013). Additionally, students did not get the intentional support in high school from activities and programs that would help them in building their social capital once they matriculated to college.

Designing a Social Capital Intervention

Based on the needs assessment and intervention literature, an intervention was developed to impact the preconditions of social capital and the mobilization of social capital. To address the preconditions of social capital, intervention literature stressed the importance of networking training (Lerman, 2013). For the mobilization of social capital, the intervention literature pointed to the use of properly matched mentorship programs (Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). As a result, the implemented intervention was a two-part process, including networking training and career-relevant mentorship relationships for first-generation students at BJU.

Over the Spring 2020 semester, three first-generation college students of varying majors were trained on aspects of networking and the value of social capital. After training, the students were paired with university alumni, who had also been trained, for

mentorship. The pairs connected virtually, an important component considering the outbreak of the COVID-19 pandemic, over the course of eight weeks. The intervention sought to answer the following research questions:

RQ1: How did first-generation undergraduate student mentees perceive their interactions with their alumni mentors?

RQ2: How many interactions did each first-generation undergraduate student mentee have with their alumni mentor during the intervention period?

RQ3: What learnings from the networking training contributed to first-generation students' knowledge of networking?

RQ4: To what extent did the intervention change the number of career-relevant relationships of first-generation undergraduate students?

Data Collection and Analysis

The intervention leveraged three methods for quantitative and qualitative data collection, a pre/post-test, student mentee and mentor journal reflections, and a focus group with the student mentee participants. The researcher adapted the position generator survey (Lin & Dumin,1986) to increase the relevancy of the participants' career interest in the pre/post-test. The pre/post-test data only added context about the students' networks for the study but did not answer a construct due to the adaptation's impact on validity and reliability. The journal reflections were completed by both the student mentees and their mentors after their interactions. The focus group was conducted with the student mentees at the culmination of the study. Due to the small sample size, the researcher used descriptive analysis and inductive qualitative data coding to analyze the collected data.

Study Findings and Implications

Overall, the student mentees perceived their mentorship interactions to be helpful. The mentee participants rated their interactions with their mentors as very helpful and expressed gaining several benefits through mentorship, including career advice, career insight, and personal life advice. The student mentees were comfortable with the process of networking within their mentoring relationships because of their experiences in the networking training. The student mentees expressed an increased ability in conducting written outreach, knowing what questions to ask, and building a network. Their sentiments indicate an increase in knowledge of networking skills. The mentors perceived their mentees to be engaged throughout the interactions as well. Finally, each mentee participant completed the intervention with two or more new career-relevant relationships, surpassing the expected outcome of the study design.

Though limited by a small sample size, the study contributes to the minimal body of literature regarding the mobilization of social capital among first-generation college students for internship access purposes. The study provides several implications for practice, including networking training for high school recommendations, how to create effective mentorship programs, suggestions on creating resources for first-generation college students, and how to instruct mentors when working with first-generation college students. Additionally, the study provides implications for research, including suggestions for longitudinal studies to determine the long-term impact mentorship has on first-generation college students. Finally, the study includes implications for exploring increasingly popular scalable, virtual mentorship platforms.

Chapter 1

Gaining a college degree is increasingly seen as the key to opening doors to well-paying jobs and career success (Jez, 2014). When comparing potential employee candidates, the possession of a college degree could make one candidate more desirable than another. As a result, many families encourage their children to pursue post-secondary education as a step in the right direction for the students to begin their own lives and start their own families. With more students attending college than ever before (National Center for Education Statistics, Cataldi, Bennett, & Chen, 2018), employers have turned to alternative criteria beyond college degree attainment to decide between candidates.

Over the last 20 years, employers' use of internships has increased significantly (Hurst & Good, 2010). Internships are defined as positions where students or trainees work for an organization on a term basis to gain experience or fulfill other educational requirements (NACE, 2018). Internships allow employers to see how students work in the organization's environment and assess their ideas and potential as a full-time employee. Employers gain a great deal from offering internship programs. From a cost-savings perspective, interns provide employers with a motivated and qualified, yet inexpensive, labor source (Gault, Leach, & Duey, 2010). Beyond reduced labor costs, employers increasingly use internships as a recruitment tool (Hurst & Good, 2010), often converting interns to full-time hires. The intern offer rate for full-time opportunities continues to remain significant, though it has varied slightly within the last decade. In 2013, 56.5 percent of interns received a full-time employment offer from the companies where they completed internships. Five years later, the 2018 intern offer rate from

employers increased to 59 percent (NACE, 2018). Interns provide potential employers with an efficient recruitment pipeline that builds on the intern's initial training and introduction into the company culture. The savings for transitioning interns to full-time entry-level employees has been estimated at $6,200 in training costs and an overall savings of 16 percent when compared to non-interns (Gault et al., 2010). Additionally, internships allow employers to stay connected to new concepts and ideas taught in the classroom as students become a liaison between their respective university and employer (Gault et al., 2010). The many benefits explain why 99 percent of the employer members in the National Association of Colleges and Employers (NACE) employers offer internship programs (Gault et al., 2010).

Since employers increasingly desire candidates with work experience (Gault et al., 2010; NACE, 2018), the use of internships expands. Students consistently participate in more internships. In 1980 only one in 36 graduates reported the completion of an internship (Cook, Parker, & Pettijohn, 2004). By 2000, the number of graduates completing internships grew to three out of four (Cook et al., 2004). The increase in internship opportunities also allows students to acquire valuable skills that complement their classroom knowledge. NACE has identified eight career-ready competencies, including critical thinking/problem solving, oral/written communication skills, teamwork/collaboration, digital technology, leadership, professionalism/work ethic, career management, and global/intercultural fluency that employers seek when hiring new employees (NACE, 2018). Gault, Redington, and Schlager (2000) determined that interns can hone communication, leadership, critical thinking, and teamwork skills when completing an internship.

College students' increased participation in internships improves the student's marketability as well. NACE (2018) found that when comparing two equally qualified candidates, the determining factor employers used in extending a job offer was whether the student had completed an internship with the hiring employer or had an internship in the employing industry. Upon graduating, students who completed three or more internships were more likely to secure full-time employment when attempting to enter the workforce (NACE, 2018). Additionally, 60 percent of employers cited that they would more readily consider a candidate if they had completed an internship. When weighing work experience compared to other criteria, NACE (2018) discovered that work experience was a more important factor for employers than the student's GPA, extra-curricular activities, and even the school attended. Beyond student marketability, internship experience increases the speed at which students acquire full-time employment post-graduation. Townsley, Lierman, Watermill, and Rousseau (2017) found that students with two or more internships obtained full-time employment within six months post-graduation as compared to students with no internships. Even having one internship led to more students with full-time work compared to those still looking for employment post-graduation (Townsley et al., 2017).

Considering the impact of internships on the employability and marketability of students, current and prospective students must understand the steps of acquiring an internship. Much like other full-time career opportunities, networking, and connections are the ideal way to discover internships. Employers feel that the most effective recruiting methods for internships come from in-person interaction through activities like career fairs and on-campus recruiting (NACE, 2017). Significantly less effective, yet still used,

are job or internship listings on a university career center website (NACE, 2017). Many students may find their way into an internship through previously established connections with family and friends. Neidorf (2008) shared the account of a journalism student who got two internships through personal connections with friends and faculty. The study participant secured both internships without an application process (Neidorf, 2008).

Students who are well-connected to individuals with professional roles or persons in positions of leadership within an organization will benefit significantly from their connection's success. Boulton (2015) explains the concept of must-hires, intern candidates who can circumvent the traditional hiring process due to whom they know. Must-hire students become priority or mandatory hires for the organization entirely based on their connections. Frequently, a connection with an influential person within the organization who wields their power with human resources or a hiring manager can yield an internship opportunity for the connected student. In a study about leveraging connections for internship hiring, a human resource manager recounts her inability to review the hundreds of applicants applying for a highly competitive internship at her agency because of the high-number of must-hires that would be guaranteed spots in the program (Boulton, 2015). Mentorship relationships are another method to assist students in yielding internship and employment opportunities. Smith-Ruig (2014) discovered that one-third of student participants in a mentoring program received various employment opportunities, either directly through their mentor or through their mentor's connections. Without having the same connections to advocate for access to internships, first-generation students may be at a disadvantage when looking to secure internships in comparison to their continuing-generation peers.

Problem of Practice

First-generation college students are defined as students for whom neither parents have achieved a bachelor's degree (National Center for Education Statistics et al., 2018). As of 2012, one-third of U.S. college attendees' parents had not attended college (National Center for Education Statistics et al., 2018). First-generation college students are in families that may have fewer connections or resources that yield benefits for the students' use. The relationship between these connections and resources is defined as social capital (Bourdieu, 2008). People are in positions to build social capital through engagement with others who have valuable resources and connections. Many people build social capital through relationships with other professionals that they met in college. Mentoring provides another way that individuals build social capital. From an ongoing perspective, individuals can continue to build robust social capital by engaging in professional work environments. Parents of first-generation college students may not find themselves in professional work environments or with strong associations to other degreed individuals, ultimately reducing the parent's access to valuable social capital, which can impact their students.

The literature continues to confirm that completing an internship is a deciding factor for the extension of job offers (NACE, 2018); hence, the ability of first-generation college students to attain an internship experience is a crucial part of the college experience. Ultimately, the skills and work developed in an internship impact a student's employability upon graduation. Despite the significance of the relationship between first-generation college students, mentorship, social capital, and internships, the literature on the problem is limited. The barriers at the intersection of social capital and access to

internships for first-generation college students will be the focus of this research. The research gives special consideration to the role mentorship plays in providing first-generation students with social capital to grant access to internship opportunities. As internships become increasingly crucial to college students' employability, first-generation college students' lack of access to social capital that opens doors to internships may impact their post-graduate career success.

Theoretical Framework

To understand the relationship between first-generation college students and social capital, Lin's (1999) network model for social capital will be used. At the foundation of the model is Lin's (1999) premise of social capital as an "investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns of instrumental or expressive actions" (p. 786). The model has three major blocks or components, including the preconditions or precursors of social capital, social capital elements, and the possible returns for social capital (Lin, 1999). The model's blocks connect through causal sequencing.

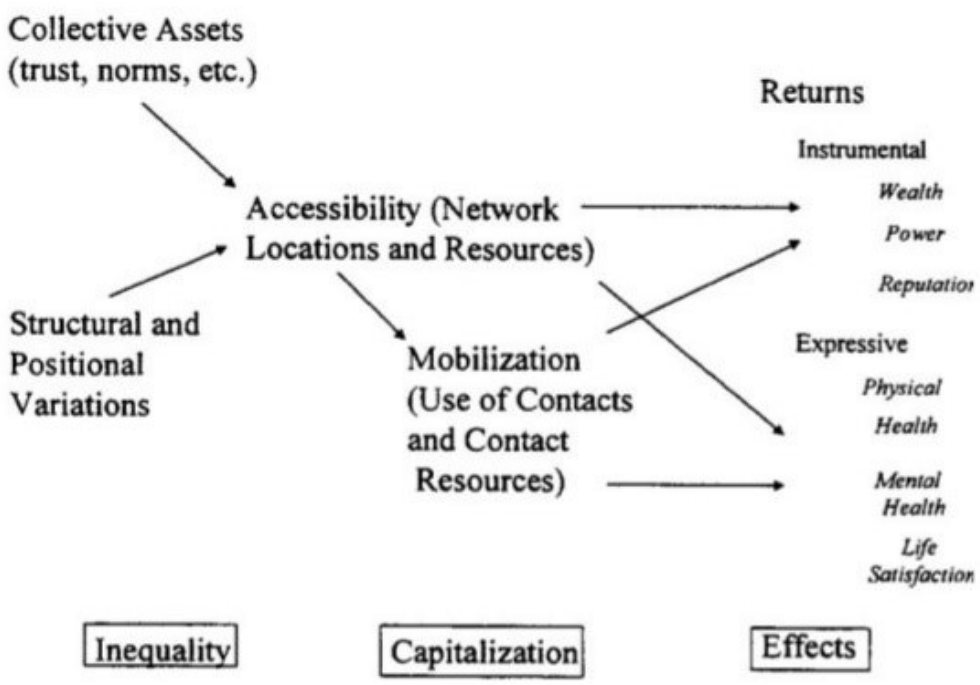

Figure 1.1 Nan Lin's (1999) Network Model for Social Capital.

The two preconditions of social capital identified in the first block include collective assets and an individual's position in the social structure (Häuberer, 2011; Lin, 1999). Collective assets consist of the possessions of an individual or group such as economy, technology, and social/political or cultural participation (Lin, 1999). Structural elements or positions are the construction and form of a network (Lin, 1999). Networks can be strong, yet have homogenous ties across individuals, or be weak with heterogenous ties that offer diversity within a network (Lin, 1999). In their earlier work, Lin, Ensel, and Vaughn (1981) considered how inequalities develop due to individuals of similar backgrounds sticking together in networks. Beyond the type of ties, Lin (1999) suggested that the network's density is not a requirement for the utility of social capital. According to the model, structural or positional elements and collective assets affect opportunities to build or preserve social capital (Häuberer, 2011; Lin, 1999). For example, in the context of first-generation college students' access to internship

opportunities, students' families or hometown might be a structural variation that impacts their ability to build social capital. Parents' education or participation in relevant social and political circles represents the collective assets that affect opportunities to build social capital. Lin suggested the transition from the social capital precursors of the first block to the social capital elements of the second block defines the inequality of social capital. This inequality is a result of the unequal distribution of access to social capital due to an individual's position within the social structure (Häuberer, 2011; Lin, 1999).

The second block holds social capital elements (Häuberer, 2011). The elements in the second block link the access to social resources and the mobilization, or use, of social resources through contacts or the resources of contacts (Häuberer, 2011; Lin, 1999). Lin (1999) posited that mobilization of social capital resources is the process that connects access to social capital and the use of social capital for a return. Häuberer (2011) suggested that capital is an example of a return individuals might receive through social resources' reinvestment. A more relevant return example for first-generation college students might be an internship opportunity. For example, students whose parents work in a specific field and have a position in that field, e.g., company, organization, etc., ultimately have access to social capital as their parents can act as a bridge to foster the use of resources. However, should a student choose not to act on the parents' position within the desired industry, their mobilization of that resource is inactive, rendering the social capital useless with no return. The individual's location within the network provides access to social capital; however, the individual must mobilize or use the contacts and resources available to them (Lin, 1999).

Finally, the third block of the model suggests two types of outcomes or returns resulting from the mobilization of social capital, instrumental and expressive (Lin, 1999). Instrumental returns are resources not previously held by the individual accessing or using social capital and include wealth, reputation, and power (Lin, 1999). Expressive returns are existing resources to the individual and include physical health, mental health, and life satisfaction (Lin, 1999). When mobilizing social capital, individuals can have one or both forms of return. For example, a family friend who uses social capital may come into money from a new job opportunity and may have life satisfaction from the new career move. Alternatively, the individual who assists a new job seeker who mobilizes social capital likely receives expressive returns of fulfillment through participating in the process. In addition to fulfillment, the person providing the favor accrues social credit from the receiver that may later provide instrumental returns of reputation (Lin, 1999).

Lin's (1999) model for social capital is particularly relevant to the problem of first-generation college students' access to social capital for internships. The model reflects the preconditions for social capital and theorizes that the inequalities individuals may experience as a result of differing collective assets or structures impacts their lives. First-generation college students' potential inability to mobilize social capital due to their network location is also reflected in the model. Finally, the returns that first-generation students seek for social capital are found in the returns of the model. Precisely, the instrumental returns of reputation, wealth, and power generally align with what all students seek when achieving degrees and transitioning to careers. The factors and underlying cause are discussed in greater detail through the lens of the model's three blocks in the following literature review.

Literature Review

Using Lin's Social Capital Theory (1999) as a theoretical framework, a review of the literature will follow to examine the problem of practice. The three blocks or components of Lin's model, inequality of social capital, capitalization of social capital, and the effects of social capital, will organize the literature review concerning first-generation college students. Each element within all three components will be explored through the literature. In the inequality of social capital, collective assets, and structural and positional variations are explored. For the capitalization of social capital, accessibility, and mobilization are reviewed. Finally, within the third component, the effects of social capital, the returns of social capital, are explored. The following will provide a more in-depth look into the problem of first-generation college students and their access to social capital concerning securing internships.

Inequality of Social Capital Causes

The inequality of social capital highlights several underlying causes that impact first-generation college students' access to social capital. The collective assets of trust and norms, as depicted in the inequality of social capital in the first block of Lin's model, relate to cultural capital. Thompson et al. (2016) defined cultural capital only as "how you know (p. 963)", a representation of the innate cultural perspectives one knows through exposure to the dominant culture. Bourdieu (2008) had a more detailed explanation postulating that cultural capital is apparent in three different forms, including embodied, objectified, and institutionalized. Much of the research exploring the ties of cultural capital to social capital reference the objectified and embodied states. Cultural goods represent the objectified state, including material objects like books, pictures,

instruments, and monuments (Bourdieu, 2008). The embodied state is displayed in dispositions of the mind and body and is only acquired through an investment of time and money to learn and gain awareness of culture (Bourdieu, 2008). The investment of these resources through educational experiences and knowledge accumulation results in acquired tastes, preferences, attitudes, and preferences (Thompson et al., 2016).

In exploring the objectified state, the research utilized various measures of literature, art, and classical music as markers for possession of cultural capital (DiMaggio & Mohr, 1985; Merolla & Jackson, 2014). In addition to cultural capital possession, Merolla and Jackson (2014) measured the activation of students' cultural capital by assessing school staff interactions, exam preparation, information seeking, and academic rules and track. Academic rules are a parents' enforcement of GPA or homework rules on their students, and the academic track is defined as the measure of students on a college preparatory path (Merolla & Jackson, 2014). The researchers used data from an Educational Longitudinal Study that included a sample of 8,116 high school students, segmented into race and class groups, and surveyed in 10^{th} grade, 12^{th} grade, and two years post-high school. Merolla and Jackson's work indicated that at any class level, white students possessed more cultural capital than black students. Additionally, the research indicated that while black families may have the motivation to activate cultural capital to yield better education outcomes for their students, their lack of resources limited their ability to do so (Merolla & Jackson, 2014). Though Merolla and Jackson's work did not isolate the cultural capital possession and activation of first-generation college students, their work is relevant to the exploration of the problem as they found

that cultural capital influenced four-year college enrollment by leading to better educational outcomes as students matriculate through high school.

Beyond the assessment of the possession of literature, art, and music for cultural capital, DiMaggio and Mohr (1985), utilized a cultural capital self-assessment that had participants of their survey answer culture statements like “I am cultured” (p. 1237). DiMaggio and Mohr used data from 1,427 and 1,479 surveyed 11th-grade men and women, respectively, in 1960 who were resurveyed in 1971 by Project Talent. The self-assessment explored the students' attitudes, activities, and knowledge of high or majority culture (DiMaggio & Mohr,1985). Unlike Merolla and Jackson's (2014) work, this research did account for first-generation college students as it included the father's high school education as a variable. This seminal article consists of older data that, by today's circumstances, are likely impacted by women outpacing men in attaining college education (U.S. Census Bureau, 2017). The exclusion of the mother's education reflects the era when women primarily held the homemaker role and married well-educated men instead of pursuing their education (DiMaggio & Mohr, 1985). DiMaggio and Mohr found that cultural capital had a significant impact on both men and women students whose fathers lacked a college education. Ultimately, the study revealed that cultural capital impacted the frequency of conversations that occurred between the students and counselors, families, and peers about their future (DiMaggio & Mohr, 1985).

Ultimately, though not explicitly included in Lin's model, cultural capital impacts much of the students' collective assets as possession of it will influence the groups that students engage with, the communities they identify, and their participation within society. Thompson et al. (2016) posited that cultural capital is the cultural dominance that

continuously perpetuates various aspects of culture like the tastes and norms of the dominant class over marginalized groups. The notion of dominant culture reflected as possession of cultural capital is reflected in Thompson et al.'s model where "who you know," or social capital, is formed based on "how you know" or cultural capital. Specifically, the shared embodied state of cultural capital among individuals facilitates relationships. As cultural capital is primarily determined by the dominant culture (Lin, 1999), students who gain exposure to dominant cultures and networks, primarily through a college education, will grow their cultural capital and awareness, building their collective assets. According to Lin's (1999) social capital model, students with robust collective assets may have more accessibility and mobilization of social capital.

Another factor contributing to inequality in social capital is education. Concerning social capital, education is not limited to obtaining a degree, which is just one example of human capital (Bourdieu, 2008). The education system also serves as a source of information, providing students with cultural and social capital through curricular and extra-curricular activities. Additionally, many students receive information about attending college from resources, including, but not limited to, their high school. Griffin, Hutchins, and Reese (2011) studied a sample of 8,000 rural high school students and found students obtained career information from a variety of resources, including parents, community members, and school counselors. Since differing resources have varying levels of knowledge and materials available to students, Griffin et al. suggested the importance of developing a more comprehensive approach to getting students post-secondary education information that involves all individuals that support students. Sharing updated career and education information with parents was suggested as

particularly helpful for parents with low levels of education (Griffin et al., 2011), as is the case with first-generation college students. As a supplement to career and education resources provided by families or schools, students can benefit from extra-curricular activities that support their education efforts, leading them to college. TRIO, federally funded student service programs for limited income and first-generation students, is an example of an extra-curricular activity promoting college access (Jez, 2014). In a study exploring the perceptions of first-generation college students' preparation for post-secondary education, Reid and Moore (2008) interviewed 13 first-generation college students. The study revealed two themes from the participants: the preparation that contributed to student success and the skills the students lacked for success (Reid & Moore, 2008). The students who leveraged extra-curricular programs like *The Leadership Academy*, a bank-sponsored mentoring program that connected high school seniors with bank executives serving as professional mentors, found the program extremely valuable and added to their preparation. The mentors taught their students a variety of skills, including networking and employment search strategies (Reid & Moore, 2008).

Within structural and positional variations in the first block of Lin's (1999) model, family and professional relationships also contribute to the inequality of social capital. Relationships can offer support, resources, and opportunities. O ‘Shea (2016) suggested that a first-generation student's possession of familial capital provides support for navigating college experiences, despite family members' lack of college experience. Similarly, family support is discovered as encouragement in a personal recount study method by Clemens' (2016) of a Latina, first-generation student. Research on family relationships also suggests that the impact of these relationships on first-generation

students depends heavily on the family's possession of other forms of capital, namely, human capital and economic capital (Coleman, 1988; Jez, 2014). Human capital is defined as the skills and knowledge that one possesses that prove useful to employers and others (Thompson et al., 2016). Bourdieu (2008) defined economic capital as money or property rights. Jez (2014) posited that families with limited financial capital have fewer resources that restrain the social capital that assists first-generation college students in selecting colleges. Limited economic capital prevents students from adequately interpreting the cost/benefit analysis of choosing college attendance. Beyond economic capital, a family's human capital, measured by the number of years of education between the parents, has an impact on prospective college students as well. Coleman (1988) used a random sample of 4,000 students to determine the effects of social capital on high school students on their educational outcomes. The study revealed that the human capital of the family and the community's social capital had a significant impact on a student completing high school (Coleman, 1988). Coleman's research further strengthens the importance of the family's role in social capital and how it may contribute to social capital inequality.

Despite the contributions of family relationships to social capital for students, students must build professional relationships that yield returns that contribute to their careers. Lin et al. (1981) considered the transition an individual experiences between relying on familial, or ascribed, relationships to relying on professional, or constructed, relationships. The further an individual gets into their career, the less reliant they become on the familial relationships they are born with, and the more dependent the individual becomes on the professional relationships that they work to build and grow as a result of

their professional environments (Lin et al., 1981). The robustness of professional relationships is dependent on the ties and the diversity between individuals (Granovetter, 1973). To grow a professional network comprised of heterogeneous individuals, Granovetter (1973) posits the use of weak ties, which are looser relationship ties that provide connections to other professionals, which yield various professional benefits.

The first component of Lin's social capital model, which represents the inequality of social capital, is comprised of two significant pieces, collective assets, and structural and positional variations. Collective assets are the trust and norms that individuals and groups possess and represent the preconditions of social capital (Häuberer, 2011). Norms and trust are what builds confidence for groups to interact, exchange, and mobilize social capital (Lin, 1999), discussed more in the next section. As demonstrated within the literature, cultural capital exists in both the embodied and objectified state (Thompson et al., 2016) and influences the norms, trust, and assets that students possess and contribute to the group. Students whose cultural capital is not of the majority culture is undervalued (O'Shea, 2016), leading to the inequality of social capital. The second major piece, structural and positional variations, is related to the existing relationships students may have through their families and communities. Though family relationships can offer support to students (Clemens, 2016; O'Shea, 2016), limited human capital (Coleman, 1988) and the need to become less reliant on family relationships (Lin et al., 1981), influences the need for students to build social capital for career gain. The second component of the model, capitalization of social capital, including accessibility and mobilization, will now be reviewed through the literature.

Capitalization of Social Capital Causes

The social capital model suggests that the network location facilitates the mobilization of social capital (Lin, 1999). Network location is essentially where the individual sits within the network in relation to the bridge or bond (Lin, 1999). Much of social capital literature describes bridging vs. bonding capital, particularly concerning first-generation college students, as this is a critical way for these students to build social capital (Clemens, 2016). Lin (1999) built upon Putnam's work and suggested bridging and bonding describes how cultural groups relay resources amongst one another. Bridging is the connecting of heterogeneous networks, where bonding is the connection in homogenous networks (Clemens, 2016). In a life history method study of a first-generation Latina student, Clemens (2016) suggested a bridging example that connected the low-income student to a prestigious university. Since Camilla's existing network consisted of other low-income individuals with limited education, her new experience in attending a prestigious higher education institution with individuals and resources different and possibly more valuable than her own created a network bridge. In contrast, since bonding is connecting with existing homogenous networks that possess similarly limited resources, it is less beneficial for first-generation students needing to gain valuable connections leading to internships.

In Structural Hole Theory, Burt (1997) proposed that structural holes, or empty spaces between two groups, in a network provide opportunities for connections across groups with differing perspectives and abilities. These structural holes present an opportunity for brokering capital, connecting individuals for the increased value of social capital. To explore this, Burt used network, background, and performance data from 170

men employed as senior leaders within an American electronic and computer firm. Burt measured social capital as a network constraint where more constraint meant fewer structural holes and less social capital (Burt, 1997). Ultimately, Burt found that the value of social capital diminished where peers did the same work, thus suggesting the need for diversity among groups. Podolny and Barron (1997) held a similar perspective in that more structural holes in an organization led to connections that promoted upward mobility. In a survey of 236 randomly selected employees of a high-technology and manufacturing firm, participants were asked about important individuals in their networks, the people in their network, the nature of those relationships, and their satisfaction and organizational commitment (Podolny & Barron, 1997). Similar to Burt's findings, Podolny and Barron discovered that structure within social relationships made a significant contribution to a person's destiny, including their occupational advancement.

The studies mentioned above are written in a professional setting and do not include college students or, more specifically, first-generation college students. However, due to each study's focus on the benefits of various relationships, they are relevant to the factors facing first-generation college students. The literature on first-generation college students concerning employment is quite limited, requiring this research to relate the workplace based theories on social capital to first-generation college students.

Because upon entering college, first-generation college students are just beginning to embark on their professional careers, their network location is heavily reliant on their parents' position in a network and access to resources. As the student continues to matriculate, however, relationships they build can shift their network location and relevant resources, ultimately opening the door to social capital. Relationships with

mentors are one method first-generation college students can adjust their network location. A small qualitative study of 17 participants, indicated that mentors provided the first-generation college students with professional opportunities and academic support (Gibbons & Woodside, 2014). First-generation college students that build social capital through mentoring or other methods have access to social capital effects, represented in the third component of the model. The literature related to the effects of social capital are reviewed in the next section.

Effects of Social Capital Factors

Anticipated returns identified in Lin's model (1999) highlight two influential factors in the problem of first-generation college students' social capital, specifically economic success and job opportunities. Social capital has a significant impact on economic success (Kmec & Trimble, 2009; Lin et al., 1981; Seibert, Kraimer, & Liden, 2001). To determine the impact of weak ties on salary, the researchers surveyed 399 male participants ages 21-64 from the tri-city New York area. Of the group, 34% used weak ties to secure their current job (Lin et al., 1981). To assess the impact of tie strength on salary, the researchers used three dummy variables for the types of channels participants used to secure employment, including personal contacts, direct to employer, and formal contacts, known as weak ties. Through regression analysis, Lin et al. (1981) determined that a person's salary could be as much as $2,500 more due to the weak ties that connect heterogeneous networks. When considering the impact, the variance in salary could have on a new grad, the financial implications are significant.

Parks-Yancy (2012) assessed the impact of first-generation college students' limited use of social capital connections and other resources available through their

university career center, determining there were financial implications. In a qualitative study with 58 college juniors and seniors, 83% were first-generation students, the researcher asked about the students' career ambitions, their social capital connections through college, and how their contacts could assist with post-graduation career plans. The researcher found that first-generation students who did not leverage their college's career center to build relationships or do career exploration had lower career aspirations, ultimately lowering their potential financial gain upon graduation (Parks-Yancy, 2012). If students do not build social capital while in college, they begin at lower salaries and have a harder time catching up with those who leveraged similar networks.

The impact on economic success will ultimately affect the student upon graduation and potentially impact their own families once they embark on that journey. Jez (2014) posited that students from families with less financial capital and success were less likely to attend college as their families may lack resources. Additionally, lower-income families have lower cultural capital that lessens the messaging of the importance of attending college (Jez, 2014). Using a nationally represented data set, pulled from the National Longitudinal Study of Youth and linked to the Integrated Postsecondary Education Data System, Jez performed binary and multinomial logistic regressions to explore the differences that wealth and income make on families in the college-going process (Jez, 2014). The study revealed that families' wealth could increase social capital (Jez, 2014). Additionally, wealthier families were more likely to attend college as compared to their lower-income counterparts (Jez, 2014). When considering first-generation students' career ambitions, their ability to achieve those ambitions and attain wealth will influence the families they later build.

Using an intergenerational life-course perspective, Lui, Chung, Wallace, and Aneshensel (2014) explored the social status attainment, measured by human and economic capital, of parents and how their children are subject to the same social status as they transitioned to adulthood. With a sample size of 8,977participants, 15 to 31 years of age, with 70.2% Whites, 15.3% Blacks, 11.0% Hispanics, and 3.5% Asians, the study applied a person-oriented approach of latent class analysis to allow identification of the effect of multiple variables to determine patterns of social status attainment (Lui et al., 2014). The study found young adults who came from privileged families with higher social status, including more education between families and more money, were more likely to have the same occurrence with their own lives (Lui et al., 2014). Comparatively, young adults from disadvantaged homes with less human and economic capital experienced the same outcomes, i.e., more disadvantages. In addition, the study found that the gap between advantaged and disadvantaged young adults ultimately widened over time (Lui et al., 2014).

Job opportunities are a type of return on social capital in Lin's model. McDonald (2011) explored the influence of race and gender on networks that contribute to social capital. The study found that maintaining access to white-male dominated networks, commonly known as the "old boys" network, provided more access to job information and high-status contacts than that of female or minority-dominated contacts (McDonald, 2011). While not all first-generation students are minorities or women, 14% are African American, and 27% are Hispanic or Latino (U.S. Department of Education, 2017). Even without considering race, first-generation students are found to have a deficit in access to job opportunities and other career-related returns based on their networks (Martin, Miller,

& Simmons, 2014). In a study focused primarily on first-generation college engineering students, the researchers surveyed students to identify engineering-related social capital resources they held when choosing their major while in school (Martin et al., 2014). The researchers surveyed both first-generation students and continuing generation students on their social capital resources. The study found that continuing generation students were found to have direct career information, opportunities, and resources from their networks when compared to their first-generation counterparts (Martin et al., 2014).

The effects of social capital on first-generation college students are outcomes of the inequality of social capital found in the first component of the model and their capitalization of social capital, as found in the model's second component. The literature reviewed through the lens of this model provides an understanding of the many factors impacting first-generation college students' social capital. Without social capital, which can be built and maintained by having relationships with diverse and resourceful individuals, first-generation college students are likely to experience employment obstacles and economic effects. Though the literature is lacking in research directly relating all aspects of first-generation students, social capital, mentorship, and internships, the available literature provides a basis for the exploration that follows.

Conclusion

College students' completion of internships to increase their employability is imperative to their career success. First-generation college students who may have limited access to social capital can find themselves at a disadvantage when attempting to secure internships. Should an internship not be secured, the student's career success is ultimately impacted. Using Lin's model for social capital (1999), the aspects of social

capital inequality, capitalization of social capital, and the effects on social capital were reviewed concerning first-generation college students. The underlying causes and factors for each component of the model were shared in connection to first-generation college students. The following chapter is an empirical examination of the factors and underlying causes of first-generation students' social capital levels.

Chapter 2

As reviewed in the previous chapter, first-generation college students are students whose parents have not attained a four-year college degree. Since first-generation college student's parents do not have a college degree, the likelihood that their networks reflect the same education level is increased (Rios-Aguilar & Deil-Amen, 2012). As a result, these students do not have the same level of social capital as their non-first-generation classmates upon starting post-secondary education. Without robust social capital, first-generation students are entirely reliant on the relationships they build while in college with alumni, classmates, and employers to open doors for opportunity. Continuing generation students, or those whose parents and family members have college degrees, can often rely on family or family friends to connect them with internship placement, mentors, career exploration opportunities, or even full-time employment upon graduation.

The gap in social capital resources that first-generation college students experience compared to their non-first-generation classmates even before college is a problem that needs further exploration. Through the lens of Lin's (1999) model of social capital, the literature was previously reviewed on each of the model's three components, inequality of social capital, capitalization of social capital, and the effects of social capital. This chapter will describe a needs assessment study conducted with first-generation college students in a selective university in a middle Atlantic state.

Context of Study

The needs assessment research goal was to determine first-generation students' access to social capital and the high school experiences that taught them skills to build social capital. As a result, the data collection focused on current first-generation college

students' reflections on their previous high school academic and extra-curricular experiences, their networks, and their exposure to cultural capital.

Statement of Purpose

The research questions for this needs assessment were grounded in a few of the underlying causes of the problem: students' collective assets and their accessibility and mobilization of social capital. Research points to family and friend social networks as a significant building block to social capital. These ties are strengthened and, even more importantly, expanded through bridging or connecting heterogeneous relationships amongst groups (Lin et al., 1981). For first-generation college students whose familial connections may have less social capital value, the bridging to other heterogeneous relationships is particularly important. The school curriculum and academic resources available to students are an essential complement to whatever family and friend networks students have. Utilizing the resources and curriculum available to students related to social capital before college has been suggested to be integral in assisting students in the selection and matriculation of post-secondary education (Reid & Moore, 2008).

Exposure to professional networks helps students to explore various career options and expands their horizons on what to strive for, ultimately pushing them to higher financial achievement (Parks-Yancy, 2012). First-generation students can benefit from exposure to professional networks, as they may see less in their parents' careers. Both research questions encompass this underlying cause. The research questions developed for this study include:

R1: How do first-generation college students build social capital before college?

R2: What resources are provided in high school that supply first-generation students with opportunities to build social capital before college?

Both research questions allowed for a look at the ways and resources that students can use to build social capital before college. Some ways can include but are not limited to family and friend connections, school curriculum, extra-curricular activities, which could consist of exposure to professional networks, among other things. Resources in high school that connect students with social capital might include training, connections to career professionals, or other types of professional exposure.

Methods

Participants

The study's sample group, identified through purposeful sampling, was comprised of 13 current undergraduate first-generation college students enrolled at the study university, BJU. The sample group primarily came from an annual cohort of a campus program led by the Success Center; a center focused on the success of specialized populations at the university. The demographics of the group are inclusive of all races, ethnicities, genders, and ages. The study prohibited students under 18 years of age from participating in the research to eliminate any need for underage students to gain parents' consent through the IRB process.

Of the 13 participants, 15% identified as male, and 85% identified as female. The participants were 54% African American, 8% Asian-Pacific, 15% Multiracial, and 8% White. The class years included 15% first-year students, 15% sophomores, 31% juniors, and 39% seniors. Participants' hometowns included 39% metropolitan, 15% rural, and

46% suburban. All of the demographic data was collected as part of the needs assessment instrument and is further discussed in the next section.

Table 2.1

Participant Demographics

Demographic	Percentage
Male	15%
Female	85%
African American	54%
Asian Pacific	8%
Multicultural	15%
White	8%
First-year	15%
Sophomore	15%
Junior	31%
Seniors	39%
Metropolitan Hometown	39%
Rural Hometown	15%
Suburb Hometown	46%

Measures and Instrumentation

Two surveys were used to develop the needs assessment. The Personal Social Capital Scale (Chen, Stanton, Gong, Fang, & Li, 2008) and the Social and Cultural Capital Questionnaire (Pishghadam, Noghani, & Zabihi, 2011) provided the basis for the needs assessment tool. According to Chen et al. (2008), the Personal Social Capital Scale (PSCS) was designed to quantitatively assess the personal social capital of a wide range of subjects, including urban residents, rural residents, and rural to urban migrants. While the PSCS instrument originally included 20 questions, only ten were used for the needs assessment survey. The selected questions assessed the assets, closeness or familiarity, and willingness to help of various participant networks. Each of the components is discussed in greater detail in the following sections. The original PSCS survey questions that were not included focused more on groups and communities instead of personal

experiences and were not relevant to the purpose of this needs assessment. Chen et al. (2008) found the instrument to "hold both validity and reliability through a Cronbach alpha > 0.8, consistent item-total correlation, the successful Confirmatory Factor Analysis modeling and the significant associations of the scale-measured social capital with a number of theoretically related variables" (p. 314).

The Social and Cultural Capital Questionnaire (SCCQ) by Pishghadam et al. (2011) was selected for its focus on both social and cultural capital among participants. The researchers selected the most common indicators of social and cultural capital to develop the questionnaire. The SCCQ assessment used 42 questions; however, only 18 were adapted for use in this needs assessment survey. The excluded questions explored further into the participants' past than what was relevant to the scope of this research. . The reliability of the questionnaire was established with a Cronbach alpha of 0.88, and the validity was examined through Exploratory Factor Analysis (Pishghadam et al., 2011).

Through combining and making a few adaptations to language for clarity and subjectivity of the instrument's questions, the researcher developed a 14-question instrument (Appendix B) used for the needs assessment with current first-generation college students. The instrument took less than ten minutes to complete, collected demographic data, and explored three constructs - family and friends networks, school and academic curriculum, and cultural capital -all described in greater detail below. To ensure data reliability, the researcher's role and purpose of the study were shared with all participants. Additionally, the instrument's constructs were described in detail to study participants through the informed consent statement. The informed consent statement

(Appendix A) defined social capital and explained the components of social capital the instrument would assess.

Family and Friends Networks

Using the questionnaire developed by Chen et al. (2008) for personal social capital, the instrument measured the family and friends network construct through quantifying networks and assessing for value, determining the willingness to help of network members, and access to resources that networks provide. The survey posed questions regarding six network groups: immediate family members, relatives, neighbors, friends, classmates, and coworkers. To assess the number of connections students possessed, participants were asked: "How many people in each of the following six categories would you consider close to you?" Beyond the number of connections, the survey evaluated the value of the social capital as determined by the network's connections and willingness to help the students learn about various career paths and career opportunities (Ellison, Wohn, & Greenhow, 2014). To determine the value of the students' connections, participants were asked how many people within their networks possessed political power, wealth, company or enterprise, broad connections with others, high reputation or influence, college education, and professional jobs.

School and Academic Curriculum

To measure the students' exposure to various academic and school resources, the instrument used slightly adapted items initially developed by Pishghadam et al. (2011) for social and cultural capital. Additionally, the tool identified extra-curricular activities the participants engaged in while in high school. Incorporating the school and academic curriculum construct allowed for the instrument to gather data on how students engaged

both through academics and beyond to build social capital. Specifically, the instrument asked, "How often did your classes in high school teach you about networking (i.e., making introductions, the purpose of a professional network, etc.)?" Similarly, the same question was asked of extra-curricular activities in which the participants participated.

Cultural Capital

The instrument evaluated the student's awareness of various measures of cultural capital. The cultural capital components were selected from the Pishghadam et al. (2011) instrument and were chosen based on the traditional measures of cultural capital. Where Bourdieu (2008) suggests that cultural capital is acquired knowledge, skills, and behavior that individuals can demonstrate to others, the tool assesses common measures of cultural capital such as knowledge of music, art, and books. To determine student cultural capital, participants were asked to rate the following statement, "While in high school, I visited museums, theaters, or attended concerts."

Demographics

The participants were asked to identify their gender, race or ethnicity, class year, and hometown. For gender, race or ethnicity, and hometown, the participants had the option to "prefer not to respond." The instrument included six options for race or ethnicity, including African-American or Black, Asian-Pacific, Hispanic or Latino, Multiracial, Native American, and White. Class year options included First-year, Sophomore, Junior, and Senior. For hometown, participants could select metropolitan city, urban city, suburban city, and rural. For ease of analysis, the metropolitan and urban cities were later collapsed into metropolitan city.

Procedure

Data collection was done in collaboration with the directors of the Success Center. The program leaders assisted the researcher in recruiting students for participation by sending out a message from the researcher with the survey link. The data was collected through the summer and fall of 2018 from participants in the program. The survey was administered via Google forms.

Empirical Findings

In this section, the findings from the 13 participants who completed the survey are discussed by construct. Each student's response was transformed into a numeric response to yield descriptive statistics for each measure. The construct measurements reflected only valid responses. Invalid or multiple responses were edited from the findings.

Family and Friend Networks

Within the family and friend networks construct, four aspects were measured. Closeness, routine contact, offering help, and network value are all used to assess family and friend networks. Each of the measurements for this construct is discussed in this section.

Closeness. The family and friend network construct assessed closeness or familiarity, among networks. Participants were asked to identify within each network group, how many individuals they considered close to them. The responses for the closeness of individuals in networks were coded as 1 for a couple, 2 for average, and 3 for a lot of individuals.

Table 2.2

Close Individuals: "How many people in each of the following six categories would you consider close to you?"

Network Group	N	Min	Max	Mean	Standard Deviation
Immediate Family Members	10	1	3	1.80	.632
Relatives	12	1	3	2.17	.577
Neighbors	7	1	3	1.86	.690
Friends	10	1	3	2.30	.675
Classmates	12	1	3	2.08	.669
Coworkers	11	1	2	1.45	.522

The Personal Social Capital Scale initially measured the quantity within the networks as a couple, less than average, average, more than average, and a lot. Though these terms were indicated in the Personal Social Capital Scale (Chen et al., 2008) used to develop the assessment, they did not specify numbers for the representation of each group. In an attempt to remove subjectivity, the following quantities were associated with each answer: a couple was two or more, less than average was three to four people, average was five people, more than average was four to eight people, and a lot was more than eight people. Unfortunately, the quantities chosen for less than average, average, and more than average, were not mutually exclusive and caused the values to overlap. Upon analysis of the data, the results were collapsed into three groups: a couple (2 or fewer people), average (3-8 people), and a lot (more than 8 people). The overlap and selected terminology are discussed in greater detail in the limitations section of this chapter.

When reflecting on the closeness of individuals with their respective networks, participants indicated that they had an average number of relatives (2.17), friends (2.30), and classmates (2.08) that they would consider close to them. Participants indicated that

they had a couple of neighbors (1.86), immediate family (1.80), and coworkers (1.45) that they considered close to them.

Routine contact. The family and friend construct assessed the number of individuals within each network group that participants kept in routine contact.

Table 2.3

Routine contact: "With how many people in each of the following categories do you keep in routine contact?"

Network Group	N	Min	Max	Mean	Standard Deviation
Immediate Family Members	13	1	4	2.62	1.193
Relatives	11	0	3	1.27	.905
Neighbors	12	0	2	.33	.651
Friends	13	1	4	2.38	.961
Classmates	13	1	4	1.62	.961
Coworkers	11	1	4	1.55	1.036

The network quantity was measured as all at 100%, most at 75%, some at 50%, few at 25%, and none. The original instrument used the terms to measure the frequency of routine contact. Percentages were added to the survey by the researcher to add clarity for those participating in the survey. The responses for routine contact were coded as 0 for none, 1 for few, 2 for some, 3 for most, and 4 for all. The same quantity measurement and coding were used when assessing who offers help within networks and the assets of networks, discussed in the following sections.

Respondents reported that they kept in close contact with some of their immediate family members (2.62) and friends (2.38). Participants indicated they kept in contact with just a few relatives (1.27), classmates (1.62), and coworkers (1.55). Respondents shared they kept in contact with none of their neighbors (0.33).

Offer help. The family and friend construct assessed the number of individuals within each network group that participants felt would offer help upon request. As previously stated, the quantity measurement and coding (0-4) used in coding routine contact were used for coding this dimension.

Table 2.4

Offer help: "Among people in each of the following six categories, how many will definitely help you upon your request? (Where help is defined by advice, connections, opportunities, etc.)"

Network Group	N	Min	Max	Mean	Standard Deviation
Immediate Family Members	13	1	4	3.69	.855
Relatives	12	1	4	2.92	.996
Neighbors	12	0	3	.92	.996
Friends	13	3	4	3.46	.519
Classmates	13	0	4	1.77	1.013
Coworkers	11	1	4	2.36	.924

Participants responded that most immediate family (3.69) and friends (3.46) were likely to help upon request. Some coworkers (2.36) and relatives (2.92) were willing to help when called. A few classmates (1.77) and no neighbors (0.77) were willing to help.

Network value. The family and friend construct also measured the assets that each network group possesses. Participants were asked to indicate how many individuals within their network groups possessed political power, wealth, company or enterprise, broad connections, high reputation, college education, and a professional job. As previously stated, the quantity measurement and coding used were the same metrics used for routine contact and offering help. The following tables reflect responses for the question, "When considering people from each of the six categories below, how many possess the following assets/resources?".

Table 2.5

Immediate Family Asset Possession

Immediate Family Assets	N	Min	Max	Mean	Standard Deviation
Political Power	13	0	1	.08	.277
Wealth	13	0	4	.62	1.121
Company or Enterprise	13	0	1	.23	.439
Broad Connections	13	0	3	1.23	.927
High Reputation or Influence	12	0	2	.58	.669
College Education	11	0	3	1.18	1.079

Table 2.6

Relatives Asset Possession

Relatives Assets	N	Min	Max	Mean	Standard Deviation
Political Power	12	0	2	.33	.651
Wealth	12	0	2	.75	.622
Company or Enterprise	10	0	2	.90	.568
Broad Connections	12	1	3	1.50	.798
High Reputation or Influence	12	0	2	.75	.866
College Education	11	0	4	1.55	1.293
Professional Job	12	0	4	1.67	1.155

Table 2.7

Neighbors Asset Possession

Neighbors Assets	N	Min	Max	Mean	Standard Deviation
Political Power	7	0	2	.86	.900
Wealth	8	0	3	1.63	1.061
Company or Enterprise	4	0	2	.50	1.000
Broad Connections	6	0	3	1.67	1.033
High Reputation or Influence	5	0	2	.80	.837
College Education	7	0	3	1.71	.951
Professional Job	9	0	3	2.11	1.269

Table 2.8

Friends Asset Possession

Friends Assets	N	Min	Max	Mean	Standard Deviation
Political Power	13	0	2	.38	.768
Wealth	13	0	3	1.23	.927
Company or Enterprise	11	0	2	.45	.820
Broad Connections	13	0	4	2.08	1.115
High Reputation or Influence	13	0	3	1.00	.913
College Education	13	0	4	1.69	1.316
Professional Job	12	0	3	1.00	1.044

Table 2.9

Classmates Asset Possession

Classmates Assets	N	Min	Max	Mean	Standard Deviation
Political Power	9	0	3	1.11	1.167
Wealth	11	0	3	2.09	1.221
Company or Enterprise	6	0	1	.17	.408
Broad Connections	11	1	4	2.64	.924
High Reputation or Influence	11	0	3	1.36	1.286
College Education	12	0	4	2.50	1.732
Professional Job	9	0	3	1.33	1.323

Table 2.10

Coworkers Asset Possession

Coworkers Assets	N	Min	Max	Mean	Standard Deviation
Political Power	8	0	1	.75	.463
Wealth	8	0	3	1.25	1.035
Company or Enterprise	7	0	2	.57	.787
Broad Connections	8	0	4	2.25	1.389
High Reputation or Influence	8	0	4	1.50	1.41
College Education	8	2	4	3.00	.926
Professional Job	8	0	4	1.88	1.458

Participants reported that no immediate family members possessed political power, wealth, company or enterprise, and high reputation or influence. A few immediate family members possessed broad connections, college education, and professional jobs. Responses regarding relatives' assets indicated that none possessed political power, wealth, company or enterprise, and high reputation or influence. Few relatives possessed broad connections, college education, or professional jobs. Participants reported that no neighbors had company or enterprise, high reputation or influence, or political power. A few neighbors were reported to have wealth, broad connections, and college degrees. Some neighbors had professional jobs. Responses reflected that no friends had political power or company or enterprise. A few friends possessed wealth, high reputation or influence, college education, and professional jobs. Some friends were found to have broad connections. Participants cited no classmates with a company or enterprise. A few classmates were found to have political power, high reputation or influence, and

professional jobs. Some classmates were found to have wealth, connections, and college education. For coworkers, participants indicated that none had political power or company or enterprise. Few coworkers had wealth, high reputation or influence, and professional jobs. Some of the participants' coworkers had broad connections, and most had a college education.

School and Academic Curriculum

The school and academic curriculum construct assessed how frequently students' high school and extra-curricular activities offered various programs associated with building social capital. The activities included: connected with college-educated professionals, visited professional environments, suggested exploring different career paths, taught making professional connections, and taught networking. The initial instrument did not provide specifics on frequencies, so they were added for clarity to the instrument. Participants could choose very often (weekly), more than average (monthly), average (semesterly), less than average (yearly), and none. The selected responses were coded to 0 for none, 1 for yearly, 2 for semesterly, 3 for monthly, 4 for weekly.

High school experiences. Participants indicated the frequency of their high school activities offering experiences to build social capital.

Table 2.11

Frequency of High School Exposure: "How often did your high school offer programming (or discuss) …"

Type of Activity or Topic	N	Min	Max	Mean	Standard Deviation
College Educated Professionals	13	0	3	1.54	1.198
Professional Environments	13	0	2	1.00	1.00
Explore Career Paths	13	0	4	2.31	1.437
Professional Connections	13	0	3	1.31	1.377

While in high school, participants indicated that yearly their high school provided engagement with college-educated professionals (1.54), that they visited professional environments (1.00), were taught about making professional connections (1.31), and networking (1.15). Each semester, the high school suggested that students explore different career paths (2.31).

Extra-curricular experiences. Participants indicated the frequency of their high school extra-curricular activities, offering opportunities to build social capital.

Table 2.12

Frequency of Extra-curricular Exposure-"How often did your extra-curricular offer…"

Type of Activity or Topic	N	Min	Max	Mean	Standard Deviation
College Educated Professionals	13	0	3	1.31	.947
Professional Environments	12	0	4	.92	1.240
Explore Career Paths	12	0	4	1.000	1.414
Professional Connections	12	0	4	1.08	1.311
Networking	12	0	4	.92	1.165

Participants cited that yearly their high school extra-curricular activities connected students with college-educated professionals (1.31), suggested exploring different career paths (1.00), and taught making professional connections (1.08). According to participants, their extra-curricular activities did not provide them with opportunities to visit professional environments (.92), nor did they teach networking (.92).

Cultural Capital

The cultural capital construct assessed both familiarity with and frequency of exposure to cultural elements. The initial instrument used a Likert scale to measure the aspects of cultural capital; a similar Likert scale was used in this study to measure the respondents' familiarity with aspects of cultural capital. Participants could select extremely familiar, more familiar than average, average, less familiar than average, or not at all. The responses were coded to 0 for not at all, 1 for less familiar than average, 2 for

average, 3 for more familiar than average, and 4 for extremely familiar. Participants reported less familiarity than average with famous music composers and classic literature.

Table 2.13

Familiarity with culture-"I am familiar with…"

Type of Culture	N	Min	Max	Mean	Standard Deviation
Famous Music Composers	13	0	3	1.23	1.166
Classic Literature	13	0	3	1.54	.967

When assessing the frequency of participants' cultural exposure, time specifics were not included in the initial instrument; thus, they were added to this survey for clarity. Participants could choose very often (weekly), more than average (monthly), average (semesterly), less than average (yearly), and none. The responses translated to 0 for none, 1 for yearly, 2 for semesterly, 3 for monthly, 4 for weekly. Participants reported that they talked with other adults monthly about jobs and education (3.0). Other activities, such as buying or borrowing books and enjoying reading, were reported to occur on a semesterly basis (2.85). Participants indicated they talked with their parents about job and education semesterly (2.69) basis. The least frequent activities reported by participants were visiting museums, theatre, or concerts; these were done yearly (1.46).

Table 2.14

Frequency of Culture Exposure- "While in high school, I..."

Type of Culture	N	Min	Max	Mean	Standard Deviation
Visited museums, theaters, or concerts	13	0	3	1.46	.967
Bought or Borrowed Books	13	0	4	2.85	1.281
Enjoyed reading	13	0	4	2.85	1.405
Talked about job and education with family	13	1	4	2.69	1.251
Talked about job and education with other adults	13	1	4	3.00	1.080

Results

This section presents a broad overview of the empirical research that measured three constructs, including family and friend networks, school and academic curriculum, and cultural capital. A more in-depth review is shared in the following discussion section. Through the family and friend network construct, participants indicated that immediate family, friends, and relatives were the groups with the most individuals they felt closest (Table 2.2), kept in routine contact (Table 2.3), and believed would help them (Table 2.4). When considering each group's network value, participants (Tables 2.5 - 2.10) indicated that all immediate family, relatives, and neighbors lacked political power, wealth, company or enterprise, and high reputation or influence. Few relatives and immediate

family were found to have broad connections, college education, and professional jobs. No friends had political power and company or enterprise, but a few friends had wealth, high reputation or influence, college education, or professional jobs. Some friends had broad connections.

Within the school and academic curriculum construct, participants indicated they participated in some social capital building activities in high school annually (Table 2.11). Each year participants' high schools provided engagement with college-educated professionals, visited professional environments, were taught about making professional connections and networking. Semesterly, the high school, suggested that participants explore different career paths. Participants' extra- curricular activities (Table 2.12) connected students annually with college-educated professionals, suggested exploring different career paths and taught making professional connections. Extra-curricular activities did not provide participants any visits to professional environments or teach networking.

Within the cultural capital framework, participants indicated they were unfamiliar with famous music composers or classic literature (Table 2.13). Participants reported monthly and semesterly discussions with other adults and parents, respectively, on jobs and education (Table 2.14). Participants indicated annual experiences with attending theatre, museums, or concerts (Table 2.14).

Discussion

The survey responses provided a full perspective about the experiences that this group of first-generation students had with social and cultural capital before entering college. Specifically, insight into the networks in which they engaged, aspects of their

high school curriculum, and insight into their cultural exposure and familiarity have proven to be particularly revealing concerning social capital. Specifically, the networks which were closest to the student and those they expressed would be most likely to help, including immediate family, friends, and relatives, have limited assets to share with the student. When looking deeper into two assets, broad connections and a professional job, that are particularly valuable to students in building social capital, connecting with mentors, or finding internship opportunities, participants reported these groups as having asset limitations. Among immediate family members, 77% of participants reported none to a few family members having broad connections, and 54% of participants reported none to a few family members with professional jobs. Among friends, 31% of participants reported none to a few friends with broad connections, and 62% of participants reported none to a few friends with professional jobs. Also, finally, among relatives, 77% of participants reported none to a few relatives with broad connections, and 39% indicated none to a few relatives had professional jobs. Essentially, the individuals that first-generation students can count on the most for help are not in the best position to offer assistance with specific resources.

Based on the lack of broad connections and professional jobs among family members and friends, students must expand their networks to include individuals who possess these two vital assets. The literature also supports the finding that individuals become less reliant on familial connections as they engage in their careers and become more reliant on ascribed relationships (Lin et al., 1981). Beyond leveraging networks for actual connections and ultimately social capital, students might rely on these networks to learn about networking or the process of building professional networks. If students are

unable to rely on these networks, turning to the school curriculum and other extra-curricular activities to learn about the process would be ideal. As the survey indicates, however, most participants' high school curriculum and extra-curricular activities did not frequently expose them to these skills. Seemingly, high schools and extra-curricular activities may not accept the responsibility of making programming available to a student on the topics of networking or the value of building networks. If the high school and extra-curricular activities do not provide the resources to learn about building social capital, the student may be at a disadvantage as they matriculate through college.

Based on the responses to the survey, specifically within the school and academic curriculum and family and friend network constructs, these two components are significant to the possession of social capital as they impact the preconditions and mobilization of social capital, respectively. Ultimately, the groups with the most number of individuals whom students feel they can call upon for help, immediate family, friends, and relatives, lack the resources to assist the students in the professional areas needed through broad connections and professional jobs. Additionally, students do not get the intentional support in high school of activities and programs that would help them in building their social capital once they have matriculated to college. As a result, focusing an intervention that addresses intentional curriculum that supports building social capital and building asset-rich networks for first-generation college students' will be the ongoing focus of this research. The next chapter will review the theoretical framework related to an intervention for the problem as well as explore the intervention literature on the chosen points of impact.

Limitations

The empirical results had some limitations to consider when reflecting on the data results. First, the instrument utilized for data collection was adapted from its original form, affecting the reliability and validity of the instrument. Without tested and confirmed reliability and validity for the adapted instrument, the survey results become a less trustworthy source. As a result, the researcher's anecdotal experience and area knowledge as a career service professional become crucial to understanding the student experience. Second, a small sample size limits the generalizability of the survey. A larger sample size would provide a perspective with more variety in responses. Third, the terms selected for some of the options made aspects of the survey challenging to interpret, causing several participants to select more than one response for some questions. The multiple responses made the responses invalid, causing some questions to have fewer participants. Additionally, some of the selected terms created an overlap in response categories. The overlap required the researcher to condense several of the responses into mutually exclusive categories. Finally, the survey's scope was limited in that it only asked participants about their experiences related to high school. Including questions about the student's current experiences while in college related to the same topics would have provided a broader perspective on the participants' current mindset and any changes they have experienced since entering college.

Chapter 3

As discussed in the previous chapters, first-generation college students face several barriers when accessing social capital that opens doors to internships, mentoring, and employment opportunities. Internships foster opportunities for current college students to gain work experience and build connections within the companies for which they work (NACE, 2018). As a result, internships have become an increasingly important experience that increases students' employability (NACE, 2018). While applying for internships online serves as one method of accessing the opportunity (NACE, 2017), leveraging connections and relationships presents a more effective way to secure an internship opportunity (Niedorf, 2008). Relationships and connections offer students the opportunity of referral vs. an impersonal connection like applying online. Referrals from incumbent employees lead to more job interview invitations and higher job offer rates than non-referred applicants (Di Stasio & Gerxhani, 2015). Considering the impact of referrals and connections on employment opportunities, harnessing social capital is instrumental to career success.

Social capital encompasses the connections and relationships that provide the resources that connect individuals to opportunities (Lin, 1999). First-generation college students whose parents have not completed a four-year degree (National Center for Education Statistics et al., 2018), may have limited access to social capital (Hayes, 2018). With limited access to social capital, first-generation college students' existing networks reflect less variety among its members, specifically those who may provide college and professional development relevant to them (Rios-Aguilar & Deil-Amen, 2012). This chapter provides a review of interventions related to the primary factors that impact

social capital and first-generation college students, preconditions, and mobilization of social capital.

Network Model for Social Capital

To understand how an intervention might impact the relationship between first-generation college students and social capital Lin's (1999) network model for social capital, previously discussed in Chapter 1, is used as a theoretical framework. The intervention literature found in this chapter is organized around the elements of the model; however, for a more in-depth review, refer to Chapter One.

Intervention Literature Through a Social Capital Theory Lens

Using Lin's (1999) model for social capital theory as a theoretical framework, a review of the intervention literature examines two points of impact for the proposed intervention. First, there is an exploration into the preconditions for social capital, specifically collective assets, as well as structural and positional variations. Second, the author examines the mobilization of social capital. After the literature review, the paper proposes a suggested intervention.

Preconditions of social capital

Considering Lin’s (1999) social capital theory, the preconditions of social capital include collective assets like education and social and cultural knowledge. Many interventions consider how to impact collective assets that provide social capital. Across the intervention literature, three major themes emerged: employability training, student self-confidence, and exposure to professional environments.

Employability training. The need for employability training is evident for both students and working individuals (Lerman, 2013). Employability training includes topics like teamwork, critical thinking, appropriate business communication skills, and specific to social capital, networking (Lerman, 2013). Because employability skills include aspects of communication and networking, they are useful to learn to build social capital. Students who gain training on employability are better equipped to join the workforce (Lerman, 2013).

Spence and Hyams-Ssekasi (2015) evaluated a mentoring program that assisted 22 mentee graduate business students in building their employability skills. The mentoring program leveraged the knowledge of 20 mentor career professionals from a local business and paired them with final-year business students (Spence & Hyams-Ssekasi, 2015). The researchers' purpose was to meet the employability needs of graduate business students from a local university by engaging local employers to assist in employability training. After the twelve-week program, qualitative data from mentee focus groups revealed student acknowledgment of their growth in various skills, including resume writing, interviews, and work ethic (Spence & Hyams-Ssekasi, 2015). Participating mentors noted the growth of employability skills in students, yet they also readily acknowledged the lack of career focus in their mentees (Spence & Hyams-Ssekasi, 2015). The researchers believed that the mentors perceived that mentees' lack of career focus was attributed to the generation gap between the groups (Spence & Hyams-Ssekasi, 2015).

Another mentoring program, known as Lucy (Smith-Ruig, 2014), found that students enhanced employability skills through participation in the mentoring program.

Smith-Ruig (2014) conducted qualitative research on the Lucy Mentoring Program of Australia, that linked professional career mentors with 21 female business and law students of similar career interests to educate them on different career options. The purpose of the research was to determine the effectiveness of the mentoring program that engaged the female student participants. Through the program, mentors were expected to share the workplace's values and attitudes (Smith-Ruig, 2014). The mentoring program resulted in mentees who received training and were able to practice career-related tasks. Though the specific training content was decided upon at the discretion of each mentor, the training goal was to allow mentees to apply their classroom knowledge to a work-based setting (Smith-Ruig, 2014). Mentors provided the training to their mentees through a required 35 hours of contact time, either in one-on-one meetings or at the mentors' workplace. In contrast to the Spence and Hyams-Ssekisa (2014) work, which surveyed both mentor and mentee, Smith-Ruig only captured the mentees' perspective through two qualitative instruments, open-ended surveys, and phone interviews. Gathering data from just one aspect of the mentor experience, as seen in Smith-Ruig's research, gives a limited vantage point into the attainment of students' employability skills.

Mentoring programs, however, are just one way to develop employability skills within students. In contrast, Lerman (2013) examined some youth programs that successfully developed employability skills in students, many without a mentoring component. In a review of five nationally known career development programs for students across the United States, including *ChalleNGe, Job Corps, Career Academies, Year-Up, and Career and Technical Education*, Lerman explored the impact of employability skills on participants in each program. Specifically, Lerman explored the

relevant skills leading to success in the job market and what interventions have expanded the non-academic and employability skills of those in the job market. In addition to mentoring, programs like Career Academies used internships and actual classroom training on building employability skills (Lerman, 2013). Though the programs focused on at-risk youth rather than college students, the results showed that building employability skills through classroom training resulted in higher earnings for participants vs. nonparticipants (Lerman, 2013). The programs that used internships for building employability skills found that students expressed increases in their teamwork and problem-solving skills (Lerman, 2013).

This literature suggests many ways to develop students' employability skills. The intervention literature includes reviews of mentoring programs (Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015) to teach employability skills and other methods, including classroom learning and internships (Lerman, 2013). While the research primarily relied on qualitative data to capture the findings of the respective interventions, the perspectives differed. The inclusion of mentor and mentee perspectives on the impact of employability skills provides a balanced view of the program's success. Reviewing interventions that focus on developing employability skills for students relates to the preconditions of social capital found in collective assets. Because the preconditions of social capital impact the students' ability to construct and maintain social capital (Lin, 1999), developing employability skills can shift the student's position in the social structure through education (Häuberer, 2011) ultimately helping to remedy the inequality of social capital.

Student self-confidence. A benefit uncovered by some of the literature was the building of student self-confidence (Schwartz et al., 2018; Spence & Hyams-Ssekasi, 2015; Smith-Ruig, 2014). Mentoring programs in many forms developed students' confidence when engaging with mentors of similar interests or values (Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). Before pairing graduate business students with mentors, Spence and Hyams-Ssekasi (2015) visibly recognized students who lacked self-confidence by their physical signs of nervousness at the networking event where pairing took place. The students' concerned and anxious feelings made it difficult for them to communicate with their mentors (Spence & Hyams-Ssekasi, 2015). To combat the difficulty in mentee communication skills, the program equipped the mentors with tools to facilitate a conversation with their nervous mentees. By the end of the program, both mentors and mentees acknowledged improved student confidence (Spence & Hyams-Ssekasi, 2015). Smith-Ruig (2014) discovered similar results of confidence-building with the mentees in their program. After working with their mentors, students cited a more certain ability to engage with other adults in professional settings as they had the opportunity to gain familiarity with their mentors and other adults during their engagements (Smith-Ruig, 2014). Mentees commented on their desire to have a peer-to-peer element of the mentoring program. Beyond their mentors' engagement, mentees also expressed a desire for time to connect with other mentees. The mentees felt that spending time with fellow mentees would provide help in communicating with mentors and learning from peer to peer shared experiences (Smith-Ruig, 2014).

One mentoring program in the intervention literature leveraged peer-to-peer mentoring among students to provide support and life skills to first-year students.

Shrestha, May, Edirisingha, Burke, and Linsey (2009) examined peer-to-peer mentoring that connected first-year student mentees with 21 junior and senior mentors in a blended face-to-face and electronic mentoring, or e-mentoring, program. E-mentoring allows participants to engage virtually through email and online discussion boards (Shresta et al., 2009). The number of mentees was not indicated as the target focus was the program mentors. The researchers' goal was to explore a mentoring program implemented over two years that incorporated face to face and e-mentoring. Within this intervention, two levels of peer-to-peer learning existed, mentor-to-mentee and mentor-to-mentor. Shrestha et al. (2009) captured the reflection of mentees that expressed an increase in their self-confidence, stating, "you helped me understand that I was better than I had perceived myself" (p.120). While the mentors did not express increases in their self-confidence due to their peer-to-peer interaction, they did communicate attainment of other communication, organization, and time management skills as they worked to balance their academic and mentorship responsibilities (Shrestha et al., 2009).

Beyond mentoring, students build self-confidence from their participation in programs that connected them with adults to complete a task (Larson, Walker, & Pearce, 2005). Larson, Walker, and Pearce (2005) completed a case study on four youth programs with 10 to 13 high school student participants within each program. The researchers explored the benefits of youth-driven vs. adult-driven programs. Within the adult-driven programs, adults had more control but sought youth insight into the program's activities. The students who participated in the adult-driven program shared in qualitative interviews an increased self-confidence as the adults taught them new skills (Larson et al., 2005).

As evidenced by the literature (Larson et al., 2005; Shrestha et al., 2009; Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015), students can build their self-confidence in many ways including mentoring, peer-to-peer learning, and adult-driven programs. Building student self-confidence contributes to the preconditions of social capital found in Lin's (1999) social capital theory model through collective assets. Having high self-esteem can equip students with the tools needed to build valuable relationships that increase social capital (Schwartz et al., 2018). Students with high self-esteem are more comfortable when approaching and talking to individuals who are different and potentially more senior than them (Spence & Hyams-Sskasi, 2015), making it easier to connect and build valuable relationships. Interventions that have building student self-confidence as a focus have the potential to minimize the inequalities found in the preconditions of social capital (Häuberer, 2011).

Professional environment exposure. Another theme across the intervention literature was student exposure to professional environments such as joining in meetings, meeting individuals of various career backgrounds, and asking career-related questions to individuals (Gannon & Maher, 2012; Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). For example, Weisblat and Sell (2012) reviewed an initiative, the Graduate Grant Writing Center (GGWC), at Cleveland State University, whose focus was to provide resources to graduate students through mentoring, teaching, and other methods. GGWC provided cultural resources to students who lacked exposure to many corporate environments or had limited experience in professional settings (Weisblat & Sell, 2012). Though the students were not first-generation, exposure through mentoring and various workshops still influenced them to more readily apply for grants that would assist them in their career aspirations (Weisblat & Sell, 2012).

The Lucy program mentees also expressed the benefits of exposure to professional environments (Smith-Ruig, 2014). Beyond just providing insight into the variety of career paths, the exposure to professional environments presented the realities of working within a corporate environment to the students that would ultimately help their adjustment when entering full-time employment (Smith-Ruig, 2014). A mentee of the program commented about the exposure, "I'm glad that I had that experience, so I know what kind of work environment I like and what I don't like" (Smith-Ruig, 2014, p. 775). While many students cited learnings as a primary benefit from professional exposure, other students had more tangible benefits by like wages (Lerman, 2013). Students who participated in career academies, or learning communities centered around industries of work, and who gained exposure to professional environments by completing

internships experienced a 17% increase in earnings compared to students not in career academies (Lerman, 2013). Three different statistical models, including the regression-based approach, the instrumental variables approach, and the principal stratification approach, determined that the earning increase was directly related to exposure to work environments (Lerman, 2013).

Exposure to professional environments can allow students to learn more about the world of work, including the cultural norms within the workplace (Smith-Ruig, 2014). Students can receive exposure to professional environments through mentorship, internships, and educational workshops (Lerman, 2013; Smith-Ruig, 2014; Weisblat & Sell, 2012). Exposure to professional environments can be tangible with earnings (Lerman, 2013) or more helpful knowledge that assists students in their transition into full-time employment (Smith-Ruig, 2014). Regardless of the method, the exposure to professional environments impacts the preconditions of social capital, as described by Lin's (1999) social capital model.

Mobilization of Social Capital

The second point of impact within Lin's (1999) social capital theory found in the intervention literature is the mobilization of social capital. The mobilization of social capital considers access to social capital and the use of social capital for a return (Lin, 1999). The primary focus found in the literature was the development of mentoring programs. As discovered in the intervention literature, mentorship increases students' access to social capital as the mentorship relationship connects them with individuals who have helpful resources. Once connected with a resourceful and well-positioned mentor, students can better mobilize or use the contacts and resources available to them

(Lin, 1999). This mobilization might include access to internships or job opportunities. This section will present three critical pieces for developing successful mentoring programs: mentor and mentee preparation, mentorship pairing, and mentorship structure.

Mentor and mentee preparation. Across the intervention literature, the emphasis on mentor and mentee preparation was significant. Preparation for mentees included aspects from gaining commitment to training mentees on rules of engagement to setting appropriate expectations (Gannon & Maher, 2012; Simmonds & Lupi, 2010). Despite being senior to mentees, mentors required training as well. Mentor preparation included gathering career data, extensive training on communication, and limiting expectations of mentees (D'Abate & Eddy, 2008; Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015). Gannon and Maher (2012) researched improving an existing mentoring program for 100 students within hospitality. In the first iteration of the program, Gannon and Maher found that preparing the students with training on the importance of mentoring and networking was most important. The students' lack of knowledge about mentoring made them less equipped to take full advantage of the mentor relationships, making the relationship less valuable for them (Gannon & Maher, 2012). The researchers implemented this feedback with the second cohort of the program. Gannon and Maher may have significantly benefited from an exercise explored by Reardon and Walsh (2017), which taught students the value of building and cultivating relationships in a non-threatening peer setting. The activity introduced students to social capital by having them first share their career desires and then make introductions to fellow students. The exercise's benefit was twofold. First, students gained confidence in networking, and second, they learned the value of making connections (Reardon & Walsh, 2017).

Another step in preparing mentees included the application process (Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). Interventions leveraged a selective application

process to attract more students that understood the value of networking and were intrinsically motivated to participate extensively with their mentors (Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). Though not a student mentoring program but instead a program for employees within the hospitality industry, Simmonds and Lupi (2010) found that having a low commitment on the part of the mentee impacted the quality of the mentoring relationship established through an e-mentoring platform. With e-mentoring gaining in popularity due to location limitations (Murphy, 2011), having committed mentees engaged in mentoring programs is vital to mentoring success (Simmonds & Lupi, 2010). Murphy's (2011) findings confirmed the importance of commitment and initiative on the part of the mentee as integral parts to e-mentoring programs. Students willing to take action in reaching out to their mentor was significantly associated with the student's satisfaction with their paired mentor (Murphy, 2011).

In addition to having committed and engaged mentees, mentor commitment and engagement is integral to the mentoring program's success (D'Abate & Eddy, 2008). The literature revealed the first step in gaining mentor commitment was capturing their current professional information, including current position, career path, and values (D'Abate & Eddy, 2008; Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015). Collecting the data helped the students in learning more about their potential mentees to prepare for a robust relationship (D'Abate & Eddy, 2008). Mentor career information and value statements were also central to the pairing process, further discussed in the next section (Spence & Hyams-Ssekasi, 2015). Another step in preparing mentors was providing them with the appropriate knowledge to work with mentees (Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015). Some programs leveraged more intensive mentor

training than others. Shrestha et al. (2009), for example, did an eight-hour training for the e-mentors within the peer mentoring program yet did not prepare the mentees.

In contrast, in a virtual mentoring program primarily facilitated through email, Murphy (2011) did not require any training on the part of the mentor. Mentees did not receive any training either but did receive instruction on how to write emails appropriately (Murphy, 2011). Murphy (2011) determined that the mentor's satisfaction with their mentee was directly associated with their interaction frequency. Without mentee training to influence the frequency of contact inside the mentorship relationship as found within other intervention literature, perhaps the mentorship relationship suffered as a result.

Preparing students for the mentoring relationship can impact the mobilization of social capital, consistent with Lin's (1999) social capital theory. Mentorship relationships can provide access to social capital; however, students' knowledge of how to use them and understand their benefit impacts the student's ability to mobilize social capital (Häuberer, 2011; Lin, 1999). The intervention literature uncovered several ways to prepare students for successful mentoring relationships including educating students on the value of relationships (Gannon & Maher, 2012; Reardon & Walsh, 2017), ensuring student commitment (Murphy, 2011; Simmonds & Lupi, 2010), and collecting mentor career information (D'Abate & Eddy, 2008; Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015).

Mentorship pairing. Pairing mentees with the appropriate mentors is a process that involves careful consideration and contributes significantly to the satisfaction of mentor program participants (Gannon & Maher, 2012). A proper matching impacts the perceived success of the mentorship relationship (Murphy, 2011). Much of the intervention literature focuses on the like-pairing of mentors and mentees, but a few interventions chose other factors. Spence and Hyams-Ssekasi (2015) based matching on mentee career aspirations and mentor career expertise with less emphasis on each person's personality or personal values. The limited attention to other details reflected negatively in the student's qualitative feedback on the matching process (Spence & Hyams-Ssekasi, 2015). One student stated, "It may have helped if the mentor was a bit more interested as well because my thoughts are that she may have been pressured into being involved" (p. 308). Additionally, once mentees perceived a mismatch in their mentoring relationship, they became disengaged and neglected to find other common ground (Spence & Hyams-Ssekasi, 2015).

Conversely, Gannon and Maher (2012) incorporated personal values and interests in the pairing process to match based on career. The inclusion of personal values and interest in the matching reflected in positive responses within the data and highlighted the importance of matching on multiple dimensions (Gannon & Maher, 2012). As demonstrated by Simmonds and Lupi (2010), an even higher level of engagement in the matching process involved mentees in the selection of their mentors. The authors consulted mentees in the process of mentor selection through preliminary interviews. As a result of being involved in the pairing, 88% of mentees and 75% of mentors expressed satisfaction with their paired relationships (Simmonds & Lupi, 2010). Despite the

positive responses on matching, some participants voiced distrust with their mentorship relationship (Simmonds & Lupi, 2010). The theme of trust was present in other interventions as well.

The presence of trust had a significant impact on the mentoring relationship within the literature (Spence & Hyams-Ssekasi, 2015). While having trust in relationships is essential, Jarrett, Sullivan, and Watkins (2005) found that the trust between youth and adults builds over time. In an exploration of high school youth programs led by adults, a key finding from Jarrett et al. was the process of students coming to trust adults. Initially, the students felt distrust and suspicion toward the adults leading the program. With time, the students grew to trust the adults who created better working relationships (Jarrett et al., 2005). The intervention literature indicated that the combination of proper pairing and time facilitates trust that leads to mentorship success (Jarrett et al., 2005; Simmonds & Lupi, 2010).

Proper mentorship pairing can help build relationships that mobilize social capital. Connecting mentors and mentees based on career interests, values, and other similarities can be beneficial in creating satisfying mentorship relationships (Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015). Additionally, proper pairing builds trust between mentors and mentees (Jarrett et al., 2005). Trust can make both parties more engaged and motivated to mobilize social capital, as demonstrated in Lin's (1999) network model for social capital theory.

Mentorship structure. Providing structure in mentorship programs was the most consistent theme across the intervention literature (Gannon & Maher, 2012; Shrestha et al., 2009; Spence & Hyams-Ssekasi, 2015). Interventions with more structure ultimately lead to more success for both mentors and mentees (Gannon & Maher, 2012). The level of the structure supplied by program organizers ranged from nonexistent (Shrestha et al., 2009;) to thoroughly regimented (Spence & Hyams-Ssekasi, 2015). Smith Risser (2013) explored an unstructured, self-identified virtual mentorship process. A student-teacher started an informal mentor network by connecting with more senior teachers on Twitter. Over time the student-teacher engaged less with virtual mentors (Smith Risser, 2013). Shrestha et al. (2009) reviewed e-mentoring among peers with minimally more structure. Once paired, student mentors had the flexibility to meet virtually or in-person (Shrestha et al., 2009). While permitting flexibility for busy mentors, the lack of structure within the blended mentoring format created impersonality in relationships making it difficult for some to connect on a deeper level (Shrestha et al., 2009).

On the opposite end of the spectrum, other mentoring programs required strict parameters. Spence and Hyams-Ssekasi (2015) evaluated a program that required an initial meeting and at least three or four face-to-face meetings as well as other phone conversations. The required face to face meetings provided opportunities to strengthen the relationship between the mentor and mentee and ultimately enhanced the mentorship relationship (Spence & Hyams-Ssekasi, 2015). Between the strict and loose parameters, D'Abate and Eddy (2008) explored a program that used interaction frequency suggestions between mentors and mentees but did not require anything. The recommended interaction frequency and suggested discussion topics proved to be

effective methods for positive engagements between mentors and mentees (D'Abate & Eddy, 2008) Simmonds and Lupi (2010) received feedback indicating mentors who desired a structured framework for meeting frequency. Participants disliked the informality of the program and sought structure to facilitate the relationship. Some mentor participants within the Lucy program were unable to adhere to the structure due to busy schedules (Smith-Ruig, 2014).

The presence of structure within mentorship relationships does not create mobilization of social capital. However, providing structure for mentorship is a successful way of encouraging ongoing interaction between mentors and mentees (Gannon & Maher, 2012), which will likely build social capital. Between busy schedules, self-conscious mentees, and different geographic locations, many factors can unintentionally prevent mentors and mentees from regularly connecting (Gannon & Maher, 2012; Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). With continuous interactions, healthy relationships are more likely to build, which will ultimately foster the mobilization of social capital, as described in Lin's (1999) social capital theory.

Conclusion

Based on the intervention literature, two points of potential intervention reside in the preconditions of social capital and the mobilization of social capital. As discovered through the intervention literature, incorporating a successful mentoring program must include training for both mentors and mentees, appropriate and intentional pairing of mentors and mentees, mentorship structure, and professional exposure for mentees. Using the learnings from the variety of mentoring programs found in the literature, an intervention is shared in the following chapter.

Chapter 4

The previous chapter provided a review of intervention literature relevant to first-generation college students and access to social capital using Lin's (1999) social capital theoretical framework. This chapter describes a two-part intervention designed to address the needs assessment's primary focus areas, the preconditions of and mobilization of social capital (Lin, 1999), through the development of a mentoring intervention for first-generation college students. The chapter reviews the purpose of the study, the study's methodology, including the implementation, data collection, and data analysis conducted.

Purpose of Study

As previously stated, the intervention focused on addressing the preconditions of social capital and the mobilization of social capital (Lin, 1999) for first-generation college students. The intervention sought to address the preconditions of social capital through training students in networking skills and the value of social capital. The intervention sought to address the mobilization of social capital by creating mentoring relationships between first-generation college student participants and mentors within the students' career fields of interest. To ensure success, the intervention prioritized incorporating findings from the intervention literature including the importance of training mentors and mentees, intentional matching based on career interest, and setting communication expectations (Gannon & Maher, 2012; Murphy, 2011; Reardon & Walsh, 2017; Spence & Hyams-Ssekasi, 2015).

Research Questions

The study sought to answer the following research questions:

RQ1: How did first-generation undergraduate student mentees perceive their interactions with their alumni mentors?

RQ2: How many interactions did each first-generation undergraduate student mentee have with their alumni mentor during the intervention period?

RQ3: What learnings from the networking training contributed to first-generation students' knowledge of networking?

RQ4: To what extent did the intervention change the number of career-relevant relationships of first-generation undergraduate students?

Research question RQ1 and RQ2 were process evaluation questions used to assess the fidelity of implementation. Research questions RQ3 and RQ4 were outcome evaluation questions chosen to evaluate the preconditions of social capital and mobilization of social capital, respectively. To address the selected research questions, the researcher planned to use a quasi-experimental, single-group design. The convergent mixed methods design provided an opportunity to capture quantitative and qualitative data to uncover robust answers to the evaluation questions. All of the research questions allowed for both quantitative and qualitative data collection methods. All four questions, their aligned data source, data collection method and frequency, and analysis method are found on the matrix in Appendix C.

Study Method

This section includes the study method for the intervention consisting of an explanation of the study participants, including recruitment methods, selection criteria, and effect size. The following logic model (Figure 4.1) displays the study's intended

components. Additionally, this section explores the measures and instrumentation used for the study.

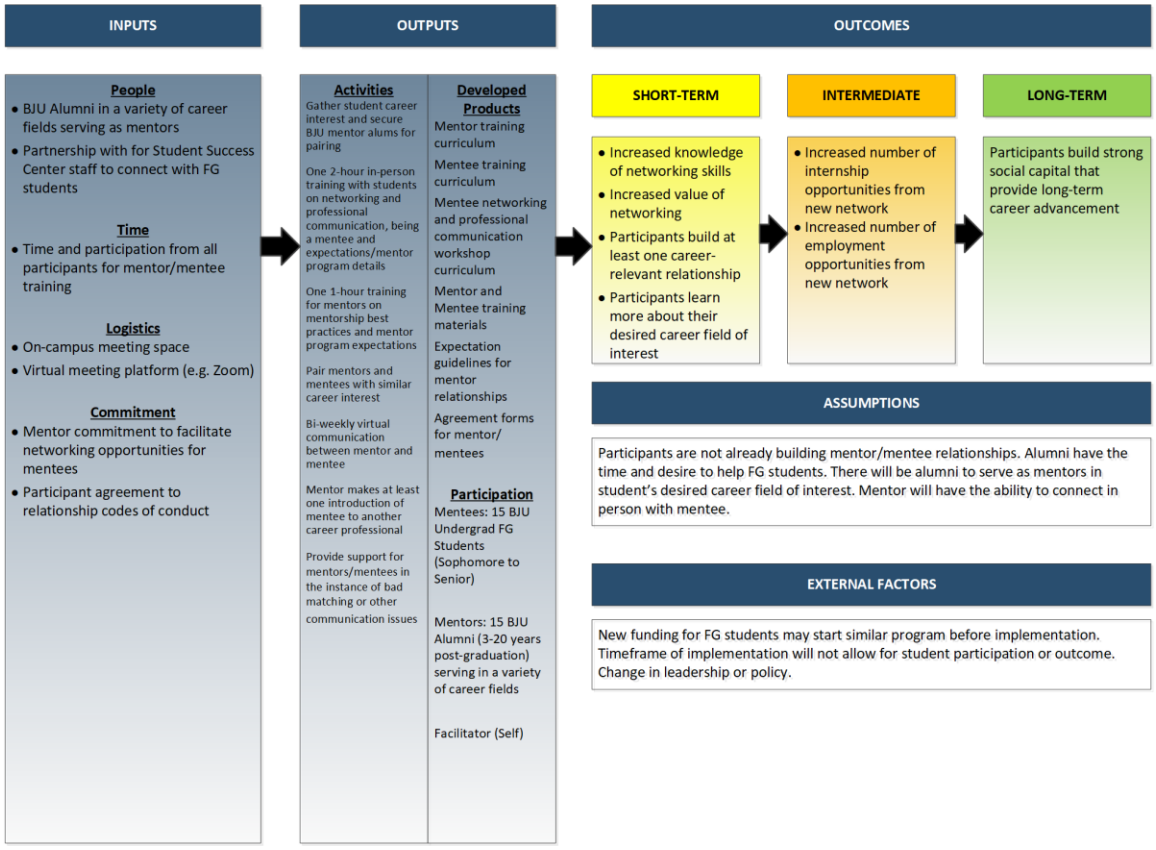

Figure 4.1. Intervention Logic Model.

Participants

Participants for the research study included two groups, current first-generation undergraduate college students and alumni of the institution who served as mentors. The participant recruitment and selection criteria are discussed below.

Student recruitment. The researcher conducted the recruitment of students in two ways. First, an advertisement was placed in the daily announcements for BJU. The advertisement (Appendix N) inquired about the interest of first-generation college students of BJU to participate in the intervention study. The advertisement included eligibility of the students and asked them to reach out to the researcher, indicating their participation interest. The online announcement yielded only three interested candidates. Students who responded to the advertisement received an invitation and link to participate in a virtual informational session via Zoom to learn more about the study design and requirements for participation.

The second student recruitment method was a direct email sent to first-generation undergraduate students at BJU. The Success Center (SC), a department at BJU that provides support to first-generation students, provided the researcher with email addresses to 286 students who self-identified as first-generation students or who have previously participated in first-generation campus programming. All academic majors and class years (freshman through junior) were included in the potential subject pool. The email (Appendix O) sent to students included explaining why they were receiving an email and invited them to participate in the information session held virtually via Zoom to learn more about the study design and participation. The initial email yielded 13 interested student responses. To better manage sharing information regarding the study, each student that indicated interest via email received a response email (Appendix P) inviting the student to attend a virtual information session to learn about the study.

Following the email outreach, the researcher conducted and recorded the virtual information session via Zoom. The session topics included the study context, key terms,

study process, participant expectations, and next steps for participation. Based on student responses from both recruitment methods, 16 students were invited to the session. There were three live attendees at the session. Because of the virtual session's low attendance, a follow-up email (Appendix Q) was sent to all 286 students again with a link to the recorded session. The follow-up email encouraged them to watch the 10-minute video to learn more about the study.

Additionally, the email asked that the interested students email the researcher of their desire to participate. A total of 14 eligible students indicated an interest in participating in the study. The recruitment goal was at least 15 students.

Alumni recruitment. The researcher recruited alumni participants through assistance and partnership with colleagues from the office of Development and Alumni Relations. Additionally, colleagues who worked closely with Development and Alumni Relations, but within academic departments, suggested alumni for the study. Alumni recruitment started after the completion of student participant recruitment because the alumni participants needed to align with the career interest and values of the selected students. The career interest and values were captured on the participant matching form, discussed further in this chapter's instrument section.

Colleagues in Development and Alumni Relations identified four eligible alumni and reached out to them on behalf of the researcher with language she crafted (Appendix R). The colleagues connected the researcher with the potential alumni participants to talk briefly about the study and share the next steps to participate. After the initial outreach by the Development and Alumni colleagues, three of the four alumni wanted to have conversations with the researcher to learn more about the study. The researcher spoke to

each of the three alumni individually about the study regarding eligibility, expectations, and participation instructions. All three of the alumni decided to participate in the study. The fourth alumnus never responded to the colleague's outreach.

Student selection. All fourteen students who indicated their interest in the study were eligible for participation and were selected to be in the study. The selected students were separated into the control and treatment groups. Due to such a small sample size, a computer-generated number system was not used. Instead, to separate the students into groups, the researcher first numbered each participant from 1 to 14. Each number was written on a slip of paper, folded, and placed into one bowl. Two additional bowls were labeled, one with treatment group and one with control group. The numbered slips of paper were chosen at random, placed in the bowls, alternating between treatment and control. Upon completion of the exercise, the treatment group had seven participants, and the control group had seven participants. After the students were assigned to either the control or treatment group, they received an email (Appendix S) indicating their designated groups and explaining their necessary next steps. Based on their selected group, the students had different steps necessary for participation in the study.

The students selected for the control group were asked to submit their study participant form as required for IRB and to complete the network survey virtually via Google forms. Of the seven students selected for the control group, four of the students completed and returned the necessary consent form and completed the position generator pre-test. The researcher continued to follow up with the other selected students from the control group to get their signed consent forms, but never got a response from this outreach.

The students selected for the treatment group were asked to submit their study participation form, complete the position generator pre-test virtually via Google forms, and complete the mentee participant matching form. Of the seven students selected for the treatment group, two of the students did not respond after notification of their selection for the study. Despite three additional outreach attempts, these two selected students did not respond, forcing the researcher to move forward without their participation. The remaining five students submitted their completed consent forms, the position generator pre-test, and the mentee matching form (Appendix I). The students' mentee matching form was used to capture each student's career interest to match them appropriately with an alumni mentor later in the study. Each of the five students was also asked to indicate their availability via doodle poll to participate in the study's mentee training. The collected student availability was used to set up convenient dates for student participants for the in-person networking training. Though all five students completed the necessary paperwork and later participated in the networking training, the researcher was only able to identify three mentors to match with the students. As a result, the treatment group included just three participants. The student mentee treatment group participants were coded as T1, T2, and T3.

Alumni selection. As previously mentioned, the alumni recruited for the study were chosen based on their ability to match the students' career interests in the treatment group. The students' completed mentee matching forms, with identifying information removed, were shared with the alumni relation colleagues to identify alumni who would align with student interest. In total, three selected alumni were asked to submit consent forms and fill out the alumni mentor matching form. The alumni mentor participants were coded M1, M2, and M3. Each alumnus was paired with a student who had an aligned career interest. The aligned pairs are M1/T1, M2/T2, and M3/T3. Despite multiple efforts, the researcher as unable to secure two additional alumni to pair with the remaining students. The inability to pair the remaining two students is a challenge discussed in the next chapter's limitation section. Beyond the alumni's completion of the mentor matching form, the alumni submitted their availability for the required mentor training for alumni participation.

Measures and Instrumentation

The research study used two tools to gather the necessary data for analysis. A third tool was also used to provide context for the research questions but did not answer any study constructs. The first instrument was a journal reflection used throughout the intervention duration. The second instrument was a set of questions asked during a focus group conducted upon completion of the treatment group's participation in the intervention. The third instrument was a pre/post-test, an adaptation of an existing tool to assess social capital networks, used to enhance the context of student's existing networks (Lin & Dumin, 1986).

Journal Reflection. The journal reflection instrument (Appendix E) provided prompts that encouraged the student to reflect on the building of career-relevant relationships with their mentor. The journal's first prompt asked, "What did you talk about with your mentor?". Additionally, the instrument asked, "Did your mentor connect you with any other career-related professionals? If so, please describe". Beyond the descriptive prompts, the journal reflection sought to gather data on the method of interaction with their mentor and to rate how useful the engagement was. The study guidelines instructed the student to complete their journal reflections on a bi-weekly basis upon completion of engagement with their mentor.

Additionally, the mentors were asked to complete a bi-weekly, post-engagement journal reflection (Appendix F). The mentor journal prompted them to reflect on the topics discussed with their mentees, rate their mentees' engagement level, and explain any introductions or relationship connections they shared with their mentees during the engagement. Finally, the journal prompted the mentor to include any additional information about their engagement they wanted to note.

Though the journal reflection was explicitly created for this study, the intervention literature indicated the importance of capturing both the mentees' and mentors' reflections on their experience (Gannon & Maher, 2011; Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). Spence and Hyams-Ssekasi (2015) used reflection feedback of mentee interaction to develop mentorship interventions better. Incorporating both quantitative ratings and qualitative comments about the mentorship interactions provided the opportunity for well-rounded data collection.

Focus Group. The focus group provided a qualitative assessment of the students' experience after their intervention. The focus group (Appendix K) consisted of eight questions and was approximately 45 minutes. Specifically, the focus group sought to inquire about the students' learning from both the networking training and their relationships with their mentors. The focus group included the following interview questions:

- What is one thing you learned from the networking training that you did not know previously but will use in the future?
- How would you explain your knowledge of social capital's value?
- How has the networking training impacted your comfort level with networking?
- What challenges did you experience in interacting with your mentor?
- What were some of the benefits you experienced in interacting with your mentor?
- What connections did you make as a result of your mentoring relationship?
- How has your perspective of networking changed as a result of your relationship with your mentor?
- How has the relationship with your mentor influenced your comfort level with networking?

Pre-Post Test. The pre-post instrument (Appendix D) collected demographic information and assessed the quality of the students' network. Adapted from Lin and Dumin's (1986) position generator instrument, this instrument asked students to select their top five job titles of interest first. After the students indicated their desired job titles, they were asked to identify if they know someone holding the job title and indicate the strength of the relationship. Finally, they were asked to consider if they know someone who could introduce them to someone with the chosen job title.

The adapted tool differed from Lin and Dumin's (1986) position generator in that it did not provide the job titles but instead asked the students to choose their own. According to Hällsten, Edling, and Rydgren (2015), using the position generator, "allows the researcher to get a picture of a respondent's contact network and potential network resources" (p.56). The tool was useful in identifying links to positions that possess resources helpful to the surveyed individual, including occupational status or prestige (Lin, 1999). Considering that social capital is about the resources within a social structure and the access to the resources within the structure (Lin, 1999), using the position generator examined students' knowledge of and access to individuals that possess helpful resources within occupations and work where the student had an interest. The adaptation used for the intervention was made to make the job titles more relevant to the student's interest as opposed to more general occupations found in the original instrument. Despite its widespread use throughout social capital literature (Bartelski, 2010; Hällsten et al., 2015; Lin & Dumin, 1986) by many researchers across the world in Europe, Asia, and North America, the original tool did not provide reliability and validity data. Additionally, due to the lack of reliability and validity in using the adapted tool, the instrument was

only used to add context regarding the quality of student networks and did not answer any of the study constructs.

Procedure

This section provides an overview of the implemented intervention, including the training and mentoring components, the data collection, and data analysis. It is important to note that during the intervention implementation, the COVID-19 pandemic occurred. Though the pandemic did not impact the study design, there were likely some adverse effects on the study participants and results of the study.

Student Mentee Training

The first component of the implemented intervention was networking training. Before connecting students to their mentors, all student participants participated in a training lasting approximately 2-hours. Though the intervention planned to train all students at once, securing a time that worked for all students proved to be a challenging task. As a result, two training times were scheduled, and the students were split into two groups to participate. The first scheduled training had three student mentees, and the second scheduled training had the remaining two student participants. Both trainings took place in person on a Saturday, where a light breakfast and coffee were provided.

The networking training curriculum (Appendix G) included a discussion of social capital, its definition, and its value. In defining social capital for students, it was interesting to find that they indeed had an understanding of social capital though they may not have known what to call it. Beyond talking about social capital, the students learned the tangible steps of networking. As an exercise, students were asked to write draft emails for several scenarios to practice how to introduce themselves when

connecting with others. The practice scenarios included when introducing themselves after the initial connection email to their mentor, when reaching out to someone their mentor recommended, and when reaching out to someone with whom they do not have a direct connection. The students' drafted correspondence needed some adjustments as they were too casual when reaching out to the alumni.

Another component of the training was to build a list of topics for discussion with the mentors. To build this list, the researcher created six broad themes for the student mentees to create questions by topic. The six themes were BJU experiences, career challenges, tips for success, interview preparation, and resume/cover letter. The students took approximately 10 minutes to write out questions related to each of the topics. After they wrote their questions, the researcher and students reviewed them and talked about how to have conversations about the identified areas. The researcher collected the questions, typed them up by theme, and shared them with the students after their training to use as a resource for when they later connected with their mentor (Appendix W).

The final component of the training was sharing expectations and guidelines for connecting with their mentors. The intervention literature conveyed the importance of mentees having a clear understanding of expectations when participating in mentorship relationships (Gannon & Maher, 2012; Simmonds & Lupi, 2010). Because the mentors were not finalized, the students were not notified of the mentors during training. Despite this, the students were reminded of the expectation to connect with their mentors bi-weekly throughout the relationship for approximately four to five interactions. The students had very few questions regarding the next steps as they seemed to understand what was expected of them and how they would connect with their mentor.

Alumni Mentor Training

Before connecting alumni to their student mentees, the alumni were required to participate in mentor training. Due to the staggered timing to complete mentor recruitment, hosting one training for all of the mentor participants was impossible. Consequently, three different mentor training sessions were held for each of the mentors before connecting them with their students. Each training lasted about 45 min to an hour and was conducted via Zoom.

During the training, social capital and its importance for first-generation college students were discussed with each mentor. The student reflections regarding social capital were shared with the mentors, so they knew the student mentees' perspectives. Additionally, mentors were trained on building trust through active listening, strong communication, and transparency. Finally, mentors were given the list of topics the students developed during the networking training to get a sense of what their mentees would want to discuss. The mentors found the list to be quite helpful in preparing for the interactions with their mentees.

Finally, the mentors learned of the expectations and guidelines for participation and connections with the mentees. Though a couple of the mentors were disappointed to learn that all interactions were to be virtual, they all agreed to connect with their mentees through virtual options. Additionally, the mentors understood the expectation of introducing their mentee to at least one additional contact during the study. The mentors understood the expectations of frequency and were excited to receive their connection emails.

Mentorship

The second component of the intervention was the mentorship relationships created by pairing the student mentees and the alumni mentors. After both groups participated in their respective training, each mentee was paired with a mentor that matched their career and values indicated on the mentor matching form (Appendix J). The structure of the mentorship interactions was not prescribed outside of the frequency of interaction, using virtual platforms, and providing at least one additional career-relevant contact for each student mentee. The structured, yet accommodating guidelines allowed each mentorship relationship to form according to each student's needs.

The mentorship relationships lasted eight weeks, between March 2020 and April 2020. The study guidelines asked each mentorship pair to interact virtually bi-weekly, four to five times during the study. While engaging with their mentees, mentors were asked to introduce their mentees to at least one new career-relevant connection during the study. The mentors decided when they were ready to make the connections and could do so in the manner they felt appropriate.

Data Collection

The data collection occurred using the previously described three instruments, the pre/post-test, the journal reflections, and the focus. The study's mixed-methods convergent design meant that the quantitative and qualitative data components were collected concurrently (Creswell & Clark, 2017). All data was stored online via a password secured cloud application. All participant responses were coded with identification numbers.

Pre/Post-Test

Both treatment and comparison group students completed the pre-test position generator instrument. Both sets of participants completed the instrument virtually via Google Forms. After the intervention, the treatment group completed the post-test position generator instrument after interacting with their mentor several times. Due to the adapted instrument's inability to answer the network size construct, as discussed in the previous measure and instrumentation section, the comparison group did not complete the post-test. Not having a control group represents a study limitation discussed later in the following chapter.

Journal Reflections-Mentees

As mentioned earlier, mentees were asked to complete a journal reflection after each bi-weekly interaction with their mentor. To remind the student mentees to complete the reflection, the researcher sent out an email reminder (Appendix T) to the student mentee participants to complete a journal reflection if they had connected with their mentor in the previous weeks. The email included the link for the reflection, so mentees knew precisely where to submit their reflections.

As previously mentioned, because the COVID-19 pandemic broke out across the country, the university sent the students home to complete the remainder of the semester. Once the pandemic broke out, the researcher followed up with the student mentee participants via email outreach (Appendix U), encouraging them to continue connecting with their mentors as this was an excellent time to gain insight into summer plans or just how to manage a significant change. Two of the three groups seemed to maintain a

consistent connection despite the pandemic circumstances. One of the groups appeared to have limited connection after the pandemic outbreak.

Journal Reflections-Mentors

Like the student mentees, the alumni mentors completed a journal reflection after each interaction with their mentees during the study period. The researcher completed email outreach to the mentors on a bi-weekly basis to remind them to complete their journal reflections if they had connected with their mentees during the previous week. The email included the link to the mentor journal reflection. The mentors completed each journal reflection entirely.

When the COVID-19 outbreak occurred, the researcher tried to encourage the mentors to connect with their mentees as the students had been sent home for the remainder of the semester, possibly increasing their availability to connect. While no one responded to the email regarding COVID-19, the journal reflection completions indicated that two of the mentors continued to document their interactions. One mentor did not submit additional reflections into the COVID-19 pandemic, though their mentees' corresponding reflections indicated they had at least one more interaction.

Focus Group

In April 2020, the focus group data collection was completed virtually via Zoom after the student mentees completed their mentoring experiences. All three treatment group participants joined the 45-minute focus group discussion, which was audio recorded through Zoom. The recording was transcribed using Rev.com and uploaded to Nvivo for qualitative analysis.

Data Analysis

This section discusses the data analysis used for the study. Due to a small sample size, the researcher could not utilize the quantitative analysis measures initially planned for the study. Despite the small sample size, the researcher performed other data analyses that provided valuable insight into its participants and experience.

Descriptive Analysis

The data collected through the journal reflections and the pre/post-test instrument were used to complete descriptive analysis. The submissions from the three participants in the treatment group could not provide statistically significant results. However, the researcher was able to use the data to identify patterns and trends among the participants. The journal entries, the ratings of the mentorship interactions from the mentees, and engagement ratings from the mentors provided quantitative results for descriptive analysis to complete process evaluations for RQ1. The pre/post-test responses were used for descriptive analysis of RQ4. According to Lochmiller and Lester (2017), descriptive analysis "summarizes the distribution of the data" (p. 39).

Qualitative Data Coding

Qualitative data was collected from two sources within the study, journal reflections, and the post-intervention focus group. The qualitative data collected from the journal reflections and the focus group transcriptions (Appendix V) were uploaded into Nvivo for analysis. First, the researcher reviewed the transcription and qualitative journal responses for inductive descriptive coding. Following the coding, the data were grouped into relevant themes. According to Miles, Huberman, and Saldaña (2014), inductive codes or those that progressively emerge are more empirically grounded. The qualitative

data coding created analysis to answer several of the research questions, including RQ1, RQ3, and RQ4. The small study sample size did not impact the ability to complete qualitative data coding.

Conclusion

The implemented intervention described in this chapter focused on the precursors and mobilization of social capital. Social capital literature and a conducted needs assessment informed the development of the study. This chapter presented the study's purpose, methodology, data collection, and data analysis. Research questions developed for the study, and the various instruments used to answer them were also described. The following chapter presents the key findings from the study by integrating the quantitative and qualitative data collected.

Chapter 5

Study Findings

The focus of Chapter Five is to provide the study findings related to each research question. The findings integrate the qualitative and quantitative responses from student mentees and mentors to analyze the empirical findings. The chapter will also provide implications for practice and study limitations. The chapter culminates with implications for future research and a conclusion. As indicated in the previous chapter, the researcher identified the following four process and outcome-focused research questions for the intervention:

RQ1: How did first-generation undergraduate student mentees perceive their interactions with their alumni mentors?

RQ2: How many interactions did each first-generation undergraduate student mentee have with their alumni mentor during the intervention period?

RQ3: What learnings from the networking training contributed to first-generation students' knowledge of networking?

RQ4: To what extent did the intervention change the number of career-relevant relationships of first-generation undergraduate students?

The first and second research questions reflect process evaluation, and the third and fourth questions are related to the study outcome. The three study instruments, described in the previous chapter, including the pre/post-test, journal reflection, and focus group, provided the data for analyzing each research question. Both the comparison and treatment participants completed the pre/post-test. The treatment group, consisting of three participants, completed journal reflections and participated in the focus group.

Participant Demographics

As discussed in Chapter Four, the student mentees completed a position generator pre-test instrument to capture their existing career-relevant relationship. The instrument also captured demographics on each student. The demographics included in the instrument were gender, race, hometown, school year, and school discipline. The school discipline reflected BJU's two schools, Engineering, and Arts & Sciences.

The following table (Table 5.1) lists the demographics of the four students in the comparison group. The comparison group participants are labeled throughout the study as C1, C2, C3, C4. As mentioned previously, the intervention did not pair the comparison group students with a mentor. However, their demographics and pre-test responses are listed for study context. The comparison group included three females and one male participant. The group was evenly split between engineering and arts and sciences students. From an ethnicity perspective, two students identified as Hispanic/Latinx, one student identified as Asian, and one student identified as Black/African American. Two of the students were from suburban hometowns, one was from a rural hometown, and one was from a metropolitan city.

Table 5.1

Comparison Participant Demographics

Comparison Participant	Gender	Race	Year	Hometown	School
C1	Female	Asian	Junior	Rural	Arts & Sciences
C2	Male	Hispanic/Latinx	Junior	Suburban	Engineering
C3	Female	Hispanic/Latinx	Sophomore	Suburban	Engineering
C4	Female	Black/African American	Junior	Metropolitan City	Arts & Sciences

As discussed in the previous chapter, three students participated in the treatment group for the intervention. The table below (Table 5.2) lists the demographics of the treatment group participants. The treatment group participants are listed throughout the study as T1, T2, and T3. Demographics for the mentor participants were not captured; however, each of the mentor participants aligned with the required criteria discussed in the previous chapter. All the participants were male, and two of the three were engineering students. One student was from the school of arts and sciences. Additionally, two of the three students were from suburban cities, while one student was from a metropolitan city. Finally, there were two Asian and one Caucasian participants within the treatment group. The small sample size limited the diversity among participants resulting in a study limitation. The limitations segment, found later in this chapter, further discusses this lack of diversity.

Table 5.2

Treatment Group Demographics

Student Mentee Participant	Gender	Race	Year	Hometown	School
T1	Male	Asian	Sophomore	Suburban	Engineering
T2	Male	Caucasian	Sophomore	Suburban	Engineering
T3	Male	Asian	Sophomore	Metropolitan City	Arts & Sciences

Pre-Test Data Comparison

Before the intervention, both the comparison and treatment groups were asked to complete the pre-test position generator. Though the instrument is not used to answer a construct within the study, the data provides helpful context for the relationships student mentees could build that may enhance the quality of their social capital. The comparison

group responses further indicated the types of career-focused relationships first-generation college students have without the influence of mentorship. The table below includes the pre-test position generator responses of both the comparison and treatment groups.

Table 5.3

Position generator Pre-Test Responses

Position Dynamics	Treatement Group	Comparison Group
Position A		
	Technology Start-UP	Pediatric Cardiologist
	Chemical Engineering	Mechanical Engineering
	Policy Consultant	Environmental Engineer
		Interior Design
Know Someone	No-100%	No-75%; Yes-25%
Avg. Duration of Relationship	-	3 years*
Ability to find someone	No-66%; Yes-34%	No-50%; Yes-50%
Position B		
	Engineering	Cardiothoracic Surgeon
	Doctor	Robotics Engineering
	Organizational	Chemical and
	Psychologist	Biomolecular Engineer
		Investment Banking
		(continued)

Position Dynamics	Treatement Group	Comparison Group
Know Someone	Yes-100%	No-75%; Yes-25%
Avg. Duration of Relationship	20 months	1 year*
Ability to find someone	Yes-100%	No-75%; Yes-25%
Position C		
	Business	Pediatrician
	Patent Lawyer	CAD Designer
	Political Psychologist	Environmental Scientist
		Consulting
Know Someone	No-100%	No-75%; Yes-25%
Avg. Duration of Relationship	-	19 years*
Ability to find someone	No-66%; Yes-34%	No-50%; Yes-50%

Note: *Indicates response of one student.

The students' responses indicate limited relationships with individuals who work in fields that align with the student's career interest. Additionally, many of the students indicated a limited ability to find individuals who work in the students' career fields of interest. Though the survey asked students to provide five career fields of interest (Positions A-E), participants did not respond to the fourth and fifth positions. As a result, the table only reflects the data for positions A-C.

Mentorship Pairing

After the student mentees and mentors completed the matching forms (Appendices I & J) discussed in Chapter Four, the researcher created mentorship relationship pairs for use throughout the intervention. The mentor participants are labeled M1, M2, and M3 throughout the study. The table below (Table 5.4) includes responses from each of the student mentee and mentor participants.

Table 5.4

Mentorship Matching Criteria

Matching Criteria	Mentee (T)	Mentor (M)
	PAIR 1 (T1/M1)	
Career Interest(mentee)/Career Fields Worked (mentor)	Technology; Entrepreneurship; Business	Biomedical Engineering, Electrical Engineering, Engineering Business, Volunteering (Religious)
Values	Impact; Challenging; Enjoyable	Viability in salary, integrity, and impact for the society, and personal fulfillment

(continued)

Matching Criteria	Mentee (T)	Mentor (M)
	PAIR 2 (T2/M2)	
Career Interest(mentee)/Career Fields Worked (mentor)	Biotech/ Biomolecular Engineering; Chemical Engineering; Medical field- Physician	Biotech
Values	Collaboration; Challenge; Making a difference	Company mission, Career growth, and development, Work/life balance
	PAIR 3 (T3/M3)	
Career Interest(mentee)/Career Fields Worked (mentor)	Organizational Psychologist; Political Psychologist; Policy Advisor	Global health: HIV, health system strengthening, hospital management; Domestic public health: behavioral health, capacity building, value-based care, safety net settings
Values	Influence; Helping Society; Helping Others	Integrity; communication; humility

The table reflects the variation in alignment for each mentorship pairing. Pairs one and two have a stronger alignment across careers and values. The third mentorship pair do not have exact matches in career fields and values, indicating more of a tangential alignment in matching. The inability to match the third mentorship pairing more closely

was a result of mentor recruitment challenges, a limitation discussed later in the chapter. The following sections consider the impact of alignment on interactions between the student mentees and mentors with respect to each research question.

Mentorship Interactions

After being matched, the mentors and mentees were introduced via email and were expected to meet virtually during the study period. The pairs had an eight week period to connect and build a mentoring relationship. The first pair, T1/M1, met twice during the eight-week period. The second pair, T2/M2, met four times during the study period. The third pair, T3/M3, met three times over the eight-week study period.

RQ1: Mentorship Interactions-Ratings

The first research question focused on process implementation pertaining to the rating of mentor interactions. The data collected from the journal reflections and focus group provide findings that assess the experiences of the students. As discussed in the previous chapter, the journal reflections asked student mentees to rate the helpfulness of the interaction with their mentee. The following tables list each mentee/mentor pair's perception of their interactions and the qualitative reflections they shared. The rating scale for the mentees' perceptions of the interactions was 1 for not helpful, 2 for moderately helpful, and 3 for extremely helpful. The mentors provided a rating on the engagement level of their mentees in the interactions. The rating scale for the mentors' perceptions of engagement was 1for little engaged, 2 for moderately engaged, and 3 for very engaged.

Table 5.5

T1/M1 Interactions

	Interaction Details	Mentee	Mentor
Interaction 1			
	Rating	3	3
	Key Comments	Mentor provided contact to a friend in the patent office. One of the helpful interactions I've had in awhile regarding careers and future planning. He was amiable and knowledgeable.	Connected mentee to an alum he met through BME department. Good engagement facilitated by same major and not being a freshman but interested and clear about crossroads of his process with career.
Interaction 2			
	Rating	3	-
	Key Comments	He talked about potential summer opportunities and managers willing to hire. It was a super insightful meeting.	-

Table 5.6

T2/M2 Interactions

	Interaction Details	Mentee	Mentor
Interaction 1			
	Rating	3	3
	Key Comments	Introduced to someone in drug discovery department. Overall, great first meeting. Already good plans for our next interaction.	Intro to each other, job interests, activities in school that helped career, and my company. He is interested in drug discovery; I have a friend in a related field that I will introduce him to.

	Interaction Details	Mentee	Mentor
Interaction 2			
	Rating	3	3 (continued)
	Key Comments	She assured me that experiences were relevant to my career and I was on the right track. This interaction made me feel hopeful about my future as a chemical engineer.	We reviewed his resume together. I gave him tips for strengthening his bullet points. I shared a website the describes drug development pathway.
Interaction 3			
	Rating	3	3
	Key Comments	Discussed interview tips and tricks and how biotech is responding to COVID-19	Interview tips and tricks, he is preparing for an interview for a summer internship.
Interaction 4			
	Rating	2	2
	Key Comments	Introduced to a person in antibody engineering at her company.	Connected him to a friend who is a scientist in my organization. He had questions for me on the biotech industry and my perspective on future careers.

Table 5.7

T3/M3 Interactions

	Interaction Details	Mentee	Mentor
Interaction 1			
	Rating	3	3
	Key Comments	My mentor tried to connect me with my favorite professor Adam Grant through her	I plan to connect him to a friend who knows Adam Grant, one of his favorite leaders in the org

	Interaction Details	Mentee	Mentor
		own network. We discussed my future plans and my mentor focused on helping me to expand my networks through introduction of her own networks. It really inspired me to reach out to people.	psych field. He appears to be very (continued) self-aware knows what he wants to achieve/study, knows his deficits. I'm impressed!
Interaction 2			
	Rating	3	3
	Key Comments	We talked about how to deal with crisis in trying to find balance and control. It is extremely meaningful at this time.	He's trying to figure out how to be true to himself and the life he wants to lead and not upset his family and let them down. He asked how I handled times of crisis.
Interaction 3			
	Rating	3	3
	Key Comments	We discussed how to practice public speaking skills, how will the pandemic impact grad school applications, and editing my resume/CV.	He is always highly engaged and always sends me a thank you email after each interaction. I give him a lot of credit for writing to one of his academic heroes and am thrilled that he got a response back-I can't wait to hear how it goes.

Based on the journal reflections, the three students perceived their mentor interactions to be extremely helpful, meaning that students learned new things and had

their questions answered. Additionally, the mentors described their mentees as very engaged, defined as giving detailed and engaged responses to the mentor's questions, and asking many questions of their mentor. Beyond the quantitative rating on the journal reflection, the qualitative comments from the reflections and the focus group discussion (Appendix V), held at the culmination of the study, collected student perspectives regarding various aspects of their interactions with their mentors. Themes emerged from both the qualitative journal reflection comments and the focus group conversation that aligned with the quantitative ratings the students gave on their journal reflections. The inductive themes include mentor benefits and receiving help.

Benefits of Mentorship

One of the primary ways mentees communicated their perception of their mentors' interactions was through the discussion of benefits the students received through the mentoring relationship. The benefits students indicated were in the form of several different types of learnings from their mentor relationships, including career advice, career insight, and personal life advice. Beyond their learning, an additional benefit to mentorship was the help student mentees received from their mentors.

Career advice. Students' reflections on discussions with their mentors indicated their mentors shared a range of career advice. Career advice included a variety of topics from tangible skills like resume assistance and interview preparation to insight for students on what to do regarding decision making aligned to their career trajectory. One of the mentees, T1, indicated on their journal reflection, “We talked about choices between grad school vs PhD and different career paths to pursue in engineering. *M1* was super helpful and also was able to look over my resume as well.” Another student, T2, expressed similar sentiments within the focus group, “They definitely offered help, like helpful advice and insight into the industry as well as how to get to where they are or where, how they got to where they are, which can help you get to a similar place in the future”. Beyond career advice that offered instruction on steps to take within the students’ career, the interactions with the mentors appeared to provide career insight as well.

Career insight. Where career advice may provide instruction for students on specific steps to take within their careers, students also received new knowledge of career options or career insight. The career insight mentors provided gave clarity and new perspectives for mentees considering different professions. Mentees were able to ask their mentees about the careers they are pursuing through their studies. Each of the students indicated some aspect of a new perspective through communicating with their mentor. During the focus group, participant T2 stated,

> Well, for one, at least for me was like, there's like, I thought I had a general idea of what like the career I was pursuing was about. But after like talking with a mentor and just people that are directly involved in that industry, I like realized like it was something not, it wasn't like it was along the lines of what I was thinking, but it was

much more in depth and much more elaborate and they were able to really like clear that up for me at least.

The student's comment indicates the opportunity to ask their mentor for clarity about a career they are interested in pursuing but potentially needed to learn more about.

Another mentee, T1, shared in the focus group,

> For me, my mentor provided a lot of direction on what people in my major usually do after graduation. So, with that they provided potential um, ways in that from how, like from their original career path and how they push and the mindset they had while switching careers in different paths. And they also took a look at my resume and helped me work through a lot of that as well.

T1's sentiment expressed the perception that the interaction gave direction and ideas for what career paths are an option to him upon graduating within their current field of study. In addition to career insight, one student mentee's reflection demonstrated their perception of personal life advice.

Personal life advice. Though the study's purpose was to connect students on a career-related perspective, one of the students indicated they perceived their interactions to be helpful in a personal life sense. Personal life advice was indicative of interactions that assist the mentee in navigating decisions beyond career choices and more aligned with understanding personal decisions, habits, and ideals. Participant T3 indicated,

> Um, my experiences in my mentor, um, is not as I would say professional when we really... first we talk about grad school, but later on the topic that we talk about is more on, um, how do you approach life? Um, essentially how do you face parents? How do you deal with stress? How do you increase productivity? How do you

approach difficulties? Have difficult conversation is it's more personal and more on the side of um, uh, less professional elements.

Though not based on career-related conversations, when the researcher asked the student if that type of relationship was a benefit, he replied, "It was definitely a benefit, yeah." The personal life advice was a benefit as the mentee perceived it as helpful. Receiving help is another theme that emerged from the qualitative insights about the mentees' perception of their mentorship interactions.

Receiving help. Just as was reflected in the quantitative ratings of the journal reflection, receiving help emerged as a theme within the qualitative data for the mentees. Beyond expressing their mentor's helpfulness, one student expressed a realization that other mentors and people may also seek to be helpful. T1 stated,

> For me, I don't know if it's the case for everyone out there, but at least from my mentor, maybe it's from the program, but it seems like that they were very interested in helping me advance my career and giving me like solid advice and actually caring about like the future. So, um, it seems like a lot of people that you actually reach out to, especially alumni from your school are very willing to give you advice and tell you how they got to where they are based on like their time after graduation.

Another student mentee, T3, agreed stating, "I really resonate with that. I'll say the same". The mentees expressed the helpfulness of their mentor within their journal reflection responses as well. T1 wrote, "It was actually extremely helpful, and this was probably one of the most helpful interactions that I have had in a while regarding careers and future planning". The helpfulness the mentees expressed coincided with the quantitative ratings they gave as well. Despite the help all mentees received and reported

from their mentors, aspects of some challenges still emerged concerning their mentor interactions.

Challenges

Though quite minimal and not indicated in the quantitative ratings for mentor interactions, two themes emerged from the qualitative data reflecting some challenges students had in interacting with their mentors. The challenges described during the focus group were difficulty and uncertainty. Two of the students expressed comments that aligned with these themes of challenges.

Difficulty. The positive quantitative ratings indicate that mentees primarily had a positive experience. One mentee however, discussed experiencing a bit of difficulty when asked about having any challenges in connecting with their mentor. During the focus group, Mentee T2 stated,

> I don't know sometimes I just felt like I had to be asking questions just to like really like coming out, like to really use up my time efficiently and like get the most out of this experience and just like from connecting with someone. So sometimes I felt like it was more like me just kind of asking questions and then I'd like obviously get the answers, but it wasn't like really like a conversation. At least it was, at least in the beginning.

The mentee's comments indicated that they felt the conversation was less engaging and more about asking questions of their mentor. The mentee did express changes in this sentiment when they stated,

> Mostly, but I feel like it was just because like my mentor obviously wanted a like address all any questions I had and obviously like we talked about like me

> personally and like it was, they ended up developing into a conversation and we can more natural, but definitely like early on it is much more like, like me asking you like questions about like, so what do you do? What's your company about?

Since the mentee expressed the difficulty resolved after getting into a more natural conversation with their mentor, the overall sentiment still aligns with the positive quantitative ratings of the mentee's perception. The participant's comments may signal the work, and time mentors must put forth to establish trust within the mentorship relationship.

Uncertainty. In addition to difficulty, one mentee expressed some uncertainty about the mechanics of some interactions with their mentor. Mentee T3 explained,

> I think, um, it's less of a challenge and more of an uncertainty I would say. Um, I'm not sure what to do in between the meeting. Um, in terms of like, do I keep reaching out to my mentor uh, on a like periodic basis or is it just a meeting to meeting? I'm not sure what the interaction outside of that meeting, would, would be like or, yeah.

Though the mentee's sentiments do not describe a negative interaction, the comment does explain a level of uncertainty of how to maintain ongoing communication with the mentor. This uncertainty could have taken a toll on the mentee's follow-up interaction with their mentor.

RQ2: Number of Mentorship Interactions

The second research question focused on process implementation regarding the number of mentorship interactions during the study period. The mentee and mentor journal reflection entries provided the data for the question.

Table 5.8

Number of Mentorship Interactions

Mentee	Number of Mentorship Interactions
T1	2
T2	4
T3	3

The intervention guidelines instructed both the mentors and mentees to complete a journal reflection after interacting with one another. Except for the T1/M1 mentorship pair, both parties' reflection entries indicate the same number of interactions. The M1 mentor only completed one reflection while the T1 mentee completed two. The mentee provided significant detail for the second interaction while the mentor neglected to complete a reflection.

Based upon the timeline of pairing the mentors and mentees, the expectation was that each pair could connect a least four to five times over eight weeks. According to the reflection entries, one of the three pairs, T2/M2, interacted the anticipated number of times. It is important to note that the COVID-19 pandemic may have had an impact on the number of times students and mentees interacted. Though the study only included virtual connections, the unique times' students faced in transitioning back home from living on campus possibly impacted their willingness or ability to interact with their mentor.

Fidelity of Implementation in Summary

The first two questions, RQ1 and RQ2, serve as the process evaluation questions for the study, and their findings assess the fidelity of implementation. Evaluating the fidelity and effectiveness of a program's implementation is instrumental in effectively assessing program outcomes (Rossi, Lipsey, & Freeman, 2004). Using the two identified

process evaluation research questions, the researcher assessed the mentoring intervention's implementation to understand the student mentees' experience with their mentors. Overall, the student mentees perceived their mentorship interactions to be helpful. The participants rated their interactions high quantitatively and expressed gaining several benefits through their interactions, including career advice, career insight, and personal life advice. Even though a couple of the student mentees expressed some slight challenges and uncertainty on connecting with their mentor and engaging in conversation, these feelings did not impact their overall positive feelings toward their interactions. Further, the participants' experience aligns with the intervention literature markers, including appropriate mentor and mentee preparation, pairing, and relationship structure (Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015).

While the student mentees' positive experience signifies proper process implementation, the second research question's results speak to the contrary. The limited interactions found through RQ2 compromised the process implementation. In summary, only one of the three mentorship pairs completed the expected number of interactions. The intervention literature suggested the importance of a strong mentorship structure that instructed participants towards an appropriate number of interactions (Gannon & Maher, 2012; Spence & Hyams-Ssekasi, 2015) as it fostered an enhanced mentoring relationship. Though COVID-19 may have affected the pair's ability to engage more frequently, it is unclear if their lack of connection impacted the mentoring relationships.

RQ3: Learnings from Training

The third research question was outcome-focused and asked about the learning students got from participating in the networking training before their mentoring

relationships. During the focus group, mentees were asked, “What is one thing you learned from the networking training that we did, that you did not know previously, but will use in the future or even used when you were connecting, with your mentor during, the study period?”. All the participants indicated they learned several things that they used when interacting with their mentor and will continue to use in the future. As a result, several key learnings emerged from the student mentees’ responses, including conducting written outreach, asking questions, and building a network. In addition to the key learnings, mentee participants indicated their comfort to build networks increased as well.

Conducting Written Outreach

Though the intervention process introduced mentees to their mentors by email, they had to write an initial outreach letter to their mentors to introduce themselves and set up a time to talk. Additionally, because mentors introduced their mentees to additional individuals during the study period, students had additional opportunities to write initial outreach letters to several people. On the topic of outreach, T1 mentee stated,

> I learned how to like write out emails and having that work with people from our alumni network and how to write officially to not, don't take up a lot of their time while still communicating what like my, um, desires to communicate and reach out to them.

Mentee T2 followed up, replying, "I definitely agree." The mentees' comments demonstrated their increased knowledge and understanding of how to reach out to potential mentors or to others with whom they might build a network. Knowing how to reach out to individuals unlike them is a helpful skill that not only allows mentees to

build bridges to diverse networks (Parks-Yancy, 2012) as students but throughout their life as well. Ultimately, using this skill will continue to enhance their social capital.

Questions to Ask

An additional learning the mentees expressed receiving from the networking training was about asking questions of their mentors. Mentees indicated in their focus group responses that knowing what questions to ask was helpful in their interactions. Mentee T3 stated,

> And I think, um, knowing what questions to ask is very important too. I think, at least in my experience, uh, learning how to ask questions in the networking workshop that we did and then trans, transferring that to, um, my interaction with my mentor is, it's been very helpful.

Mentee T2 agreed stating, "I definitely agree with that sentiment." The mentees' comments indicated that they used the questions developed in the intervention training talking with their mentors.

How to Build a Network

Finally, the mentees' comments during the focus group indicated their increased understanding of how to build a network. For example, when asked what they learned, mentee T2 stated,

> I think just how to foster that initial connection that you could like then build on. I think it was really important because obviously that's like how every kind of relationship starts is in the first interaction and then it grows. And then with that your network grows.

The same mentee went on to later say, “Like if I ever need any other like advice from anyone I can... now I know how to like do it and I definitely could ask these. I could like expand my network through my network”. Both of the other students indicated agreement with these statements. Learning how to build a network was a primary learning objective from the workshop, and the students’ assertions during the focus group indicate they attained it. Students who know how to build a network are more knowledgeable and equipped to participate in cultural norms (Smith-Ruig, 2014), that support the preconditions of social capital (Lin, 1999). Additionally, first-generation college students who understand the value and process of building a network can benefit from connections that yield employment opportunities (Parks- Yancy & Cooley, 2018; Parks-Yancy, 2012), an instrumental return from mobilizing social capital (Lin, 1999).

Learning how to build a network was further demonstrated by one mentee’s realization around being a bridge for other students. T3 stated, “I think one of the insights I got from both my mentor and my experience is that, um, networking isn't only about, um, bridging myself with other people, but also bridging people together. And in that way, it's also a form of networking that is very beneficial to all sides”. Though this learning is not exclusively associated with the networking training, the participant’s comments indicate that it came from the entire experience and his mentor. The reflection shared by the student mentee indicates his understanding of how to extend this learning into other aspects of his life.

Comfort

In addition to learning new skills, the students indicated increased comfort to build networks attributed to the networking training. As mentioned by the mentees,

increased comfort has made it easier to work on building their networks. For example, mentee T2 mentioned,

> I definitely feel much more comfortable going out and like going on like LinkedIn and asking someone that has like a similar career path up for advice or just information with like how they got to where they did.

T3 expressed similar sentiments stating,

> Well I think it's much easier now to just reach out to people, especially if they're, um, especially if there's like a connection between you two, whether that's like a mutual friend or like a mutual, um, like a school or like a past company that you guys know, interned at or worked at. So, I feel like it's much easier to just send an email and most people won't like the worst thing that can happen is just they won't reply to you. So that's not even that bad.

The mentees' expression of feeling more comfortable because of the workshops aligns with the training's other objectives.

Application of Learnings

While the students expressed their learning reflections from the networking workshop, some of the comments from the mentors' journal reflection further point out learning that the students gained from the workshop. One of the mentors stated in a reflection after their interaction with T3, "He is always highly engaged and always sends me a thank you email after each interaction." One of the topics covered in the networking training was expressing gratitude via email soon after engaging. Though none of the other mentors expressed this type of demonstrated learning, the other mentor reflections and ratings (Table 5.5 - 5.7) do indicate that at minimum, each mentee came prepared with

topics and questions for engaging discussion during their interactions. This was an additional skill that was emphasized in the training.

Summary of Outcome Evaluation-Networking Training

Data collected from the focus group indicated the student mentees' takeaways from the networking training provided during the intervention. Additionally, comments written in the mentor journal reflections further demonstrate how the students put their learning to use when engaging with their mentor. The findings aligned with the expected short-term evaluation outcomes identified in the Logic Model (Appendix L) and shared in Chapter Four. One expected short-term outcome was the increase of knowledge of networking skills. Implications from literature also indicate that first-generation college students should learn the essential skills associated with networking (Parks-Yancy, 2012; Reid & Moore, 2008) to build their networks that increase their chances for employment connections. The student mentees' increased ability in conducting written outreach, knowing what questions to ask, and building a network indicate an increase in knowledge of networking skills.

The mentees expressed increased comfort in the process of networking as well. The student mentee participants' boosted confidence and comfort in reaching out and fostering new relationships is vital to their ability to enhance their social capital through diversified networks and resources. The participants' newfound knowledge, coupled with their increased comfort, impacted their ability to construct and maintain social capital, potentially reducing the inequalities associated with the preconditions of social capital that first-generation college students face as identified in Lin's (1999) model.

Furthermore, the study findings for RQ3 demonstrated an increased value of networking for the participants, another expected short-term outcome evaluation. For first-generation college students seeking internship and career opportunities, an increased sense of value for building a network may influence them to expand their relationships (Parks-Yancy, 2012). The student mentees' thoughts shared during the focus group revealed their new beliefs about being a bridge to others and their ability to contribute to building networks. The students' understanding of building connections among individuals means they are not only equipped to build their networks to enhance social capital but can also receive instrumental and expressive returns, as found in Lin's (1999) model.

RQ 4: Number of Career Related Relationships

Measuring the change in the number of career-related relationships the participants had while engaging in the study was done through the focus group and the mentor/mentee journal reflections. The table below describes the number of connections for each mentee and with whom their mentor connected them.

Table 5.9

Mentee Connections from Mentor

Connection	T1	T2	T3
1	Fellow alumni, Patent attorney	Antibody engineering scientist	Mentor's friend; Colleague of T3's favorite organization psychologist
2	Hiring manager within company	-	Connected to favorite org psychologist

When asked during the focus group,

> For each of you, how many would you say additional connections, whether it be someone that your mentor connected you to or folks that you reached out to based on your mentor suggestion, how many additional people would you say, you have gotten in touch with, through the mentoring?

Each student was connected with one or two additional connections. Despite each student gaining new relationships, the nature of the connections differed between relationships. Mentees T1 and T2 were introduced to either their mentor's fellow alumni or fellow employees that worked the mentees are of interest. Mentee T3 was only introduced to one contact of the mentor, yet, his mentor encouraged and supported him in reaching out to other individuals like his "career hero." As a result, the student cited the new connection as an introduction through his mentor.

According to the mentees' focus group comments, the new contacts each mentor provided to their mentee gave new insight into an area the mentee was unable to learn directly from their mentor. For example, Mentee T2 stated,

> So the person I was connected to was more of like the engineering, like process design and I was, when talking with her, I kind of said I was kind of more interested in like developing like drugs or like antibodies. And so, she was able to connect me with someone in that aspect of it. It was in the same company, but she was able to connect. And so, we went, we had a phone call the other day and we kind of just talked about how they're different and how the expectations are different for each sector. And mostly just like the same stuff just now. I talked about with my original mentor just

> now with someone else and, and how he's, um, how he's like adapting to everything and how he adapted to his career.

The new connection was in another area more closely aligned to the student's field of interest. The same rang true for Mentee T1 who stated,

> Well, for me, one of the persons that my mentor connected me with all works in intellectual property and then he said that I could reach out to him if I have any questions regarding like any of my future projects that concern like IP or like patent process. So, I found that really helpful since like there's that, there's stuff you're gonna find online on this, these kinds of things, but it's just much helpful to get your questions answered in person. So definitely that's a great connection I thought that I made.

The mentee was able to leverage the new connection for new information and help for future projects.

Though the position generator pre/post-test used for data collection has validity and reliability limitations preventing it from answering the network size construct, student mentees shared information that adds additional context to their network-building experience. The tables below list each student's pre/post responses to the position generator instrument.

Table 5.10

T1 Position Generator Pre/Post Responses

Position Dynamics	T1 Pre-Test	T1 Post Test
Position A	Technology Start Up	Start Up Technology Company
Know Someone	No	Yes
Relationship	n/a	Mentor
Length	n/a	3 months
Ability to find someone	No	Yes
Position B	Engineering	Consulting/Business
Know Someone	Yes	Yes
Relationship	Acquaintance	Upper Classmen
Length	Few Months	1 year
Ability to find someone	Yes	Yes
Position C	Business	Biotech
Know Someone	No	Yes
Relationship	n/a	Alumni
Length	n/a	1 month

Table 5.11

T2 Position Generator Pre/Post Responses

Position Dynamics	T2 Pre-Test	T3 Post-Test
Position A	Chemical Engineer	Biotechnology Engineer
Know Someone	No	Yes
Relationship	n/a	Mentor
Length	n/a	2 months
Ability to find someone	No	Yes
Position B	Doctor	Physician
Know Someone	Yes	Yes
Relationship	Dad's Friend	Family
Length	Couple of Years	Couple of Years
Ability to find someone	Yes	Yes
Position C	Patent Lawyer	-
Know Someone	No	-
Relationship	n/a	-
Length	n/a	-
Ability to find someone	No	-
Position D	Biotech Business	-
Know Someone	No	-
Relationship	n/a	-
Length	n/a	-
Ability to find someone	No	-
Position E	Consultant	-

Position Dynamics	T2 Pre-Test	T3 Post-Test
Know Someone	No	-
Relationship	n/a	-
Length	n/a	-

Table 5.12

T3 Position Generator Pre/Post Responses

Position Dynamics	T3 Pre-Test	T3 Post-Test
Position A	Policy Consultant	Organizational Psychologist
Know Someone	No	Yes
Relationship	n/a	Professor
Length	n/a	1 year
Ability to find someone	Yes	Yes
Position B	Organizational Psychologist	Political Psychologist
Know Someone	Yes	No
Relationship	Professor	n/a
Length	More than half a year	n/a
Ability to find someone	Yes	No
Position C	Political Psychologist	-
Know Someone	No	-
Relationship	n/a	-
Length	n/a	-

Two of the mentees, T1 and T2, both listed occupations in their pre-test where they did not know anyone working in the field. Additionally, the mentees indicated they did not believe they would be able to find someone who worked in the position they listed. At post-test collection, the mentees listed the same or similar role again but now knew someone who worked in the role, their mentor. Additionally, the students also felt they could find someone who worked in the position. The mentees' responses on the pre/post-test, combined with the focus group responses, indicate the students' grasp of their change in career-relevant relationships.

Summary of Outcome Evaluation-Career Related Relationship

One of the expected short-term evaluation outcomes identified in Chapter Four was for participants to build at least one career-relevant relationship. Though the pre/post position generator test does not answer the network size construct, the participants' responses to the focus group questions regarding new relationships they built through the study indicate the intervention yielded the expected outcome. Each mentee's ability to build a relationship with their mentor created one career-relevant relationship. Additionally, each of the mentees was introduced or linked with at least one more career-related contact. As a result, each participant completed the intervention with two or more new career-relevant relationships, thus exceeding the expected short-term outcome.

By creating new career-relevant relationships, the participants began the process of bridging into heterogeneous networks with others who possess diversified resources (Lin, 2000). The heterogeneous networks increased the student mentees' access to these new-found resources made possible through different connections; this access is the mobilization of social capital (Häuberer, 2011; Lin, 1999). Because first-generation

students often have less access to networks that help navigate career decisions and connect to opportunities (Martin et al., 2014), first-generation students must work diligently to enhance their social capital. Student mentees who continue to leverage their access to new resources through the relationships built during the study can further enhance their social capital, yielding even more returns and resources.

Implications for Practice

The study has several positive implications that support working with first-generation college students. Additionally, given the researcher's anecdotal and professional experience as a career center practitioner and the intimate knowledge held through working with first-generation college students, the implications of study findings have great value. Integrating the completed needs assessment findings with the intervention findings provides implications for high school counselors and higher education practitioners. High school counselors can use the study to design and implement helpful networking training and mentorship for students planning on college attendance. University career center practitioners can leverage the study to create effective mentorship programs, create resources for first-generation college students, and to instruct mentors when working with first-generation college students.

High School Networking Training and Mentorship

The needs assessment revealed that during high school, on average, students participated in networking training annually. The needs assessment also revealed students' extracurricular activities did not include networking training. By comparing the needs assessment participants' experiences with those of the intervention participants' experiences, one can clearly see how students gained helpful, new learnings from the

study's training component that were key to developing their comfort and confidence for building relationships. As a result, high school counselors and other staff can support their students' development by offering networking training more frequently in high school.

As found in the literature, high school students that participate in training and mentoring opportunities feel more prepared for college (Reid & Moore, 2008). Based on this intervention study, not only might the students be more prepared for college, but they may be more prepared to build their networks, thus enhancing their social capital. Additionally, high school students may gain helpful life advice from mentors that prepares them for the academic rigor of college as mentees in this intervention experienced. Providing mentorship connections may combat the lacking time management and study skills Reid and Moore (2008) found that many first-generation high school students were missing upon attending college.

Connecting high school students to networking training and mentorship may prove to be helpful as students navigate internship and employment opportunities while enrolled in college. High school networking training should incorporate topics such as how to reach out to individuals with written communication, suggested conversation ideas, and how to maintain a network. Mentors should encourage high school mentees to develop helpful skills and build relationships and confidence. Students who have the opportunity to practice networking and relationship building while still in high school will have mastered the valuable skill for use during college, allowing them to focus more on their academic success.

Creating Mentorship Programs

The impact of mentorship is significant (Gannon & Maher, 2012; Smith-Ruig, 2014; Spence & Hyams-Ssekasi, 2015). For first-generation college students specifically, the impact can be particularly impactful as this study's findings indicate. Mentors can provide insight, advice, and connections, as found in this study. The confirmed benefits of mentorship for the first-generation college student participants will likely continue to yield returns as they advance in their careers. As a result, practitioners can look to this study for guidance in creating effective mentorship programs.

When practitioners seek to create effective mentorship programs, it is imperative to utilize intentional participant matching, mentor, and mentee training and set clear commitment expectations for both parties. Additionally, to reduce the uncertainty, some mentees may feel about the mechanics of maintaining communication with their mentors, providing adequate timelines and checklist steps may be helpful for a positive mentorship experience. Much of the intervention literature utilized the suggested elements for continuing generation students (Gannon & Maher, 2012; Smith-Ruig, 2014), but this study adds to high-impact mentorship practices by focusing on first-generation college students.

All of the listed elements are particularly important for connecting mentors with first-generation college students as the students often hesitate to lean on others for help. By working closely with first-generation college students, the researcher knows the students' perception that asking for help is inappropriate and that other students are making progress on their own. Higher education professionals can utilize intentional matching strategies, clear expectations, and networking training to ensure that first-

generation college students are amenable to participating in a mentorship relationship. Though this study focused on mentorship in college, high school practitioners may also find value in using the same implications to create mentorship programs in the secondary education setting.

Creating First-Generation Student Resources

Considering that first-generation college students infrequently utilize the resources provided by their university career centers (Parks-Yancy, 2012) in comparison to their continuing generation student counterparts, the study highlights the benefits first-generation students can expect from leveraging career service professionals. Career service practitioners that seek to support their enrolled first-generation students in building their networks to enhance their social capital can utilize the study results to build programming and resources that students can use. The study shows that students can confidently and comfortably build valuable networks to support their career and social capital through training and practice in a supportive environment. Additionally, giving students specific resources like email templates and sample conversation guides may prove helpful as experienced by the mentees in the study.

Instructing Mentors

Beyond support for students, another implication for practice is mentors' role when engaging with first-generation college students. Mentors of first-generation college students must be mindful of students' access to social capital and be willing to provide connections and information to students with whom they work. Mentors can open the doors to diversified networks and new resources by bridging their mentees into heterogeneous networks (Lin, 2000) through their contacts. Mentors who take on that

responsibility moving forward are supporting students' access to career information and opportunities that may be transformational to the student's social mobility.

Limitations

Though the study has helpful findings that may guide practitioners in supporting first-generation college students to enhance their social capital, the intervention had several limitations. The study limitations include sample size, control group structure, recruitment, and in-person limitations. This section reviews each limitation and provides potential corrections for future research.

The sample size of the study was limited to three mentorship pairs. The study design called for a minimum of seven mentorship pairs. The inability to find adequate numbers of mentor participants led to a significantly smaller sample size than intended. A sufficient sample size increases the study's reliability and validity (Johnson & Onwuegbuzie, 2004). The smaller sample size also limited the quantitative measures the researcher was able to use when analyzing the data. A larger sample size would allow for the use of descriptive statistics that more effectively quantitatively reflect the experiences of the participants.

A second limitation of the study was the ineffective utilization of the recruited control group. The study collected limited data from the control group, capturing only their pre-test responses for the position generator instrument. Though the position generator instrument only provided context for the network size construct and did not answer the research question, having post-intervention responses from the control group would have provided additional data for understanding students who did have mentorship experience. Better utilization of the comparison group would be to incorporate a focus

group of the comparison group participants. Using the focus group to ask the comparison participants their thoughts about networking, knowledge of social capital, comfort with building networks, and how they build them would provide a more robust comparison that highlights the treatment group's experience. However, an important consideration is that a more in-depth exploration into the comparison group might require the use of comparative research questions to accurately explore the experience between the two groups (Onwuegbuzie & Leech, 2006).

The recruitment limitations include both the timeframe for recruitment and the steps to recruitment. The study's recruitment was done during a relatively short period, driven by the need to complete students' mentoring before finals at the end of the semester. A longer recruitment timeframe may have helped to increase the number of students that participated. Additionally, recruiting the alumni after recruiting students created limitations as it was challenging to find the correct alumni to match with the students. The researcher was unable to secure mentors for two of the students initially selected for the treatment group. Recruiting alumni first and then following up with student participant recruitment would have ensured that no students would have gone unmatched as it did within the intervention.

Finally, the lack of in-person connections for the mentors and mentees was another limitation. Though the students stated they got a lot from the experience, and a couple of the students did not perceive a lack in the absence of in-person contact, one student did think an in-person component would add to the experience. The student's perspective aligns with the literature as exposure to professional environments can be extremely helpful for student mentees (Lerman, 2013; Smith-Ruig, 2014). Though

professional environment exposure was a study limitation, COVID-19's outbreak would have prevented any planned in-person connections regardless. Thinking of ways to get professional environment exposure from a virtual perspective is worth considering for future iterations.

Implications for Research

There are several implications other researchers might consider should they embark on expanding the literature on the topic of first-generation students and social capital. One consideration is shifting the study to a much longer timeframe. A more extensive study would explore the long-term impact mentorship has on internship and employment opportunities for first-generation college students. A full academic year or entire college career could allow for evaluating how long-term mentorship relationships might yield internship and job offers, both of which were long-term outcomes identified in the previous chapter. Additionally, incorporating a longitudinal study several years after graduation would allow researchers to explore the role of mentorship in career advancement beyond entry-level employment.

Shifting the study to a more extended timeframe also brings up the consideration for other study types that could provide a more in-depth exploration into the student experience. An ethnographic study on the process that first-generation college students go through to enhance their social capital for career opportunities would contribute a great deal to the existing minimal body of literature. Because ethnographies provide the opportunity to closely observe the experiences of often silent communities (Mills, 2009), the design might better highlight the gaps in resources and programmatic offerings available to first-generation college students.

Another implication for research is an exploration into the perspective of mentors. As discussed in Chapter One, the third block in Lin's (1999) network model for social capital explained expressive returns, an effect of mobilizing social capital. Expressive returns may include mental health and life satisfaction (Lin, 1999). Using research to explore to what extent mentors experience fulfillment from mentoring students and enhancing the students' social capital could provide useful insight. An understanding of mentors' benefits from mentoring may support practitioners seeking to increase alumni participation in mentorship relationships. Additionally, exploring expressive returns could be taken a step further by investigating whetherformer first-generation student mentees obtain satisfaction and fulfillment by swapping roles after graduation when becoming alumni mentors for current students.

Beyond investigating the mentor and mentee relationship, a deeper dive into the peer to peer connection is another implication for research. While Smith-Ruig (2014) found that fellow mentees wanted to connect with each other during mentorship relationships, their reasons linked to the desire to hear of each other's experiences. The willingness of this study's student mentee participants to connect with peers indicated a different motivation based on building networking relationships. Using further research to study how first-generation college students can support one another to enhance social capital would provide an interesting peer to peer context on students' use of bonding and bridging within relationships (Clemens, 2016) to connect to diversified resources.

Finally, as more new virtual mentorship platforms gain popularity, future research may benefit from exploring the effectiveness and usability of these tools. Websites like PeopleGrove and Ustrive connect students to alumni mentors who can assist students in

navigating college and career decisions. The platforms increase scalability in mentoring by removing some of the traditionally hands-on mentorship components that this study utilized. Because the platforms allow students to find their mentors based on self-identified topics of interest, future research exploring computer-based matching would provide insight into the strength of these mentorship relationships for first-generation college students and the impact on their social capital.

Conclusion

Robust social capital provides numerous benefits, including strong connections that lead to a breadth of resources and opportunities. First-generation college students can benefit from mentorship relationships with alumni that will diversify the student's network. Career advice, career insight, and help are some of the immediate benefits of mentorship students gain when connecting with alumni. Additionally, and even more critical, first-generation college students gain new contacts through their mentors, further developing their networks and enhancing their social capital. First-generation college students can more confidently and comfortably build new relationships after participating in specific networking training that provides the opportunity to learn and practice the steps to building a network. This study contributes to a minimal body of existing work focused on enhancing social capital for first-generation college students seeking to access internships and career opportunities. Despite limitations within the study, the work provides practitioners and future research with strong considerations for furthering a vital topic within higher education.

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Appendix A

Needs Assessment Survey Consent

Social capital is defined by Bourdieu (1986) as the combination of resources resulting from actual and potential relationships that yield benefits to the stakeholders in these relationships. This questionnaire is designed to assess the quantity and resources available through your high school experiences, extra-curricular activities, and personal professional networks; all of which contribute to social capital.

The survey should take approximately 10 minutes. Your participation will help in better understanding how to meet current student needs for the purposes of building social capital.

Appendix B

Needs Assessment Instrument

Social capital is defined by Bourdieu (1986) as the combination of resources resulting from actual and potential relationships that yield benefits to the stakeholders in these relationships. This questionnaire is to assess the quantity and resources available through your high school experiences, extra-curricular activities, and personal and professional networks; all of which contribute to social capital.

Section 1: Family and Friend Network

1. How many people in each of the following six categories would you consider close to you?

	A Lot (more than 8 people)	More than average (4-8 people)	Average (5 people)	Less than average (3-4 people)	A couple (2 or less people)	N/A
Your Immediate Family Members	5	4	3	2	1	N/A
Your Relatives	5	4	3	2	1	N/A
Those in your neighborhood	5	4	3	2	1	N/A
Your Friends	5	4	3	2	1	N/A
Your Classmates	5	4	3	2	1	N/A
Your Coworkers	5	4	3	2	1	N/A

2. With how many people in each of the following categories do you keep in routine contact?

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Your Immediate Family Members	5	4	3	2	1	N/A
Your Relatives	5	4	3	2	1	N/A
Those in your neighborhood	5	4	3	2	1	N/A

Your Friends	5	4	3	2	1	N/A
Your Classmates	5	4	3	2	1	N/A
Your Coworkers	5	4	3	2	1	N/A

3. Among people in each of the following six categories, how many will definitely help you upon your request? (Where help is defined by advice, connections, opportunities, etc.)

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Your Immediate Family Members	5	4	3	2	1	N/A
Your Relatives	5	4	3	2	1	N/A
Those in your neighborhood	5	4	3	2	1	N/A
Your Friends	5	4	3	2	1	N/A
Your Classmates	5	4	3	2	1	N/A
Your Coworkers	5	4	3	2	1	N/A

4. When considering people from each of the six categories below, how many possess the following assets/resources?

Your Immediate Family Members

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A

With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Your Relatives

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A
With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Those in your neighborhood

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A
With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Your Friends

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A
With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Your classmates

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A
With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Your Coworkers

	All (100%)	Most (75%)	Some (50%)	Few (25%)	None (0%)	N/A
Certain Political Power	5	4	3	2	1	N/A
Wealth	5	4	3	2	1	N/A
Owners of an enterprise or a company	5	4	3	2	1	N/A
Broad connections with others	5	4	3	2	1	N/A
High reputation/influential	5	4	3	2	1	N/A
With a college education	5	4	3	2	1	N/A
With a professional job	5	4	3	2	1	N/A

Section 2: School and Academics

How often did your high school offer programming that connected you to college educated professionals (not including your teachers or school administration staff)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your high school offer opportunities to visit professional environments (i.e. Fortune 500 workplaces, government buildings, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your high school suggest that you explore various career paths through your own discovery?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your classes in high school teach the process of professional connections (i.e. business emails, business phone etiquette, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your classes in high school teach you about networking (i.e. making introductions, the purpose of a professional network, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

List the extra-curricular activities available through your high school that you participated in while enrolled (i.e. Girl/Boy Scouts, Upward Bound, Sports, Debate, Dance, Music, Church, etc.)?

How often did your extra-curricular activities connect you to college educated professionals?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your extra-curricular activities offer opportunities to visit professional environments (i.e. Fortune 500 workplaces, government buildings, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your extra-curricular engagements in high school suggest that you explore various career paths through your own discovery?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your extra-curricular engagements in high school teach the process of professional connections (i.e. business emails, business phone etiquette, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

How often did your extra-curricular engagements in high school teach you about networking (i.e. making introductions, the purpose of a professional network, etc.)?

Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)	N/A

Section 3: Cultural Capital

Please rate your perspective on the following statements:

	Extremely Familiar	More familiar than average	Average	Less familiar than average	Not at all
I am familiar with famous music composers	5	4	3	2	1
I am familiar with classic literature	5	4	3	2	1

While in High School I…	Very often (Weekly)	More than average (Monthly)	Average (Semesterly)	Less than average (Yearly)	Not at all (None)
Visited museums, theaters, or attended concerts					
Bought/borrowed books					
Enjoyed reading (in general)					
Talked about job/education with family					

Talked job/education with other adults					

Demographic Information

Sex/Gender:

□Female □Male □Transgender □Prefer not to respond

Race/Ethnicity:

□African American/Black □Asian/Pacific Islander □Hispanic/Latino □Multiracial

□Native American/Indian □White □Non Listed (Please specify)_____

□Prefer not to respond

Class status:

□First-year student □Sophomore □Junior □Senior

Hometown:

□Rural □Metropolitan City □Urban City □Suburban City

□Prefer not to respond

School:

□ School of Arts and Sciences □Engineering School

□I certify that at least 18 years old

Appendix C

Data Collection Matrix

Process Evaluation Question	Process Evaluation Indicator (s)	Data Source	Data Collection Tool	Frequency	Data Analysis
RQ1: How did first-generation undergraduate student mentees perceive their interactions with their alumni mentors?	Ratings of mentor/mentee interactions	Mentees Mentors	Journal Reflection (Appendix A &B)	Bi-weekly, post mentor/mentee engagement	Descriptive analysis; Inductive coding; thematic analysis
	Journal Reflection Comments	Mentees Mentors	Journal Reflection (Appendix A & B)	Bi-weekly, post mentor/mentee engagement	Inductive coding; thematic analysis
	Student Mentee Comments	Mentees	Focus Group	Once at the end of the intervention	Inductive coding; thematic analysis
RQ2: How many interactions did each first-generation undergraduate student mentee have with their alumni mentor during the intervention period?	Frequency of mentor/mentee interactions	Mentees	Journal Reflection (Appendix B)	After each mentor/mentee interaction	Descriptive analysis

Outcome Evaluation Question	Construct	Data Source (s)	Data Collection Tool	Frequency	Data Analysis
RQ3: What learnings from the networking training contributed to first-generation students' knowledge of networking?	Networking skills	Mentees (Appendix V)	Focus Group	Once at the end of the intervention	Inductive coding; thematic analysis
		Mentees (Appendix E)	Journal Reflection	Bi-weekly, after each interaction	Inductive coding; thematic analysis
		Mentors (Appendix F)	Journal Reflection	Bi-weekly, after each interaction	Inductive coding; thematic analysis
RQ4: To what extent did the intervention change the number of career-relevant relationships of first-generation undergraduate students?	Network size	Mentees	Focus Group	Once at the end of the intervention	Inductive coding; thematic analysis
		Mentees	Journal reflection	Bi-weekly, after each interaction	Descriptive analysis; Inductive coding; Comparative analysis
		Mentors	Journal reflection	Bi-weekly, after each interaction	Descriptive analysis; Inductive coding; Comparative analysis

Appendix D

Pre/Post Position Generator

Please write in your top five jobs of interest on the table, Letters A-E. If you have less than five, please fill in as many as you have. After listing the jobs in letters A-E, answer questions #1-5 for each job (letters A-E).

Top 5 jobs of interest	1. Do you know anyone having this job?	2. How long have you known this person? (# of years)	3. What is your relationship with this person?	4. How close are you with this person?	5. Do you think you could find a person in the job through someone you know?
A.					
B.					
C.					
D.					
E.					

If you know more than one person, think of the one person whom you have known the longest (or the person who comes to mind first)

Demographic Data

Sex/Gender:

□Female □Male □Transgender □Prefer not to respond

Race/Ethnicity:

□African American/Black □Asian/Pacific Islander □Hispanic/Latino □Multiracial

□Native American/Indian □White □Non Listed (Please specify)_____ □Prefer not to respond

Class status:

□Sophomore □Junior □Senior

Hometown:

□Rural □Metropolitan City □Suburban City

□Prefer not to respond

School:

□ School of Arts and Sciences □Engineering School

□I certify that at least 18 years old

Appendix E

Mentee Journal Reflection

Directions: Please complete this reflection after each bi-weekly interaction with your mentor. Answer each question to the best of your ability. The reflection should take five minutes or less.

1. Your Name
2. Date of interaction with mentor
3. How did you interact?
    a. Phone
    b. Virtual Meeting
    c. Email
    d. Other-Please Describe:
4. What did you talk about with your mentor? (Please Describe)
5. How helpful was this interaction with your mentor?
    a. 1-Not helpful (e.g. Didn't learn anything new, didn't get questions answered)
    b. 2-Somewhat helpful (e.g. Learned some new things, got some questions answered)
    c. 3-Extememly helpful (e.g. Learned many new things, got all my questions answered)
6. During this interaction, did your mentor connect you to another career related professional? (e.g. Provide contact information of another person, introduce you to someone, suggest a specific person that you should connect with)
    a. Yes
        i. If yes, please briefly describe by including type of connection and how many people you were connected with in this interaction.
    b. No
7. Please include any additional reflections about this interaction:

Appendix F

Mentor Journal Reflection

Directions: Please complete this reflection after each bi-weekly interaction with your mentee. Answer each question to the best of your ability. The reflection should take five minutes or less.

1. Mentee Name
2. Date of interaction with mentee
3. How did you interact?
    a. Phone
    b. Virtual Meeting
    c. Email
    d. Other-Please Describe:
4. What did you talk about with your mentee? (Please Describe)
5. Please rate your mentee's engagement level during your interaction:
    a. 1-Little engagement (e.g. Brief responses, no questions)
    b. 2-Moderate engagement (e.g. Adequate responses, some questions)
    c. 3-Very engaged (e.g. Descriptive responses, many questions)
6. During this interaction, how did you connect your mentee to another career related professional? (e.g. Provide contact information of another person, introduce your mentee to someone, suggest a specific person that your mentee should connect with)
    a. Please briefly describe by including type of connection and how many people you connected your mentee to in this interaction

Please include any additional reflections about this interaction:

Appendix G

Mentee Training Curriculum

- Social Capital (20 minutes)
    - What it is and how its valued
    - How to build it
    - How to use it
- Networking and the relationship to Social Capital (40 minutes)
    - What is networking
    - Where it takes place
    - With whom do you network
    - How to network
        - Written professional communication
        - How frequently do you reach out
        - Maintain a network
- Mentorship Program Guidelines and Expectations (60 minutes)
    - Connecting with mentor
        - Frequency-every two weeks
        - Type of communication-phone, virtual meeting, or in person (location permitting)
        - Professional environment exposure (location permitting)
    - Suggested topics
        - Understanding Career paths
        - Success tips
        - Pitfalls within careers
        - Understand relationships
        - Making decisions
        - Overcoming adversity/challenges
        - BJU experiences and what is helpful

        - Resume Review
        - Interview preparation assistance
        - Cover Letter Review
    - How to make the best of your mentorship experience
    - What to do if you have concerns
        - Reach out to lead researcher
    - Complete bi-weekly journal reflections
    - Participate in Focus Group

Appendix H

Mentor Training Curriculum

- Social Capital from a student perspective (10 minutes)
    - What it is and how its valued
    - How to build it
    - How to use it
- Assisting your mentor in building Social Capital (10 minutes)
    - Creating connections
    - Introductions to the workplace
- Mentorship Program Guidelines and Expectations (40 minutes)
    - Connecting with mentee
        - Frequency-every two weeks
        - Type of communication-phone, virtual meeting, or in person (location permitting)
        - Professional environment exposure (location permitting)
    - Suggested topics
        - Understanding Career paths
        - Success tips
        - Pitfalls within careers
        - Understand relationships
        - Making decisions
        - Overcoming adversity/challenges
        - BJU experiences and what is helpful
        - Resume Review
        - Interview preparation assistance
        - Cover Letter Review
    - Managing expectations
        - Remember mentees are new to networking and career explorations

        - Building trust will increase engagement
        - Students are learning how to maintain networking relationships, this is a process.
    - What to do if you have concerns
        - Reach out to lead researcher
    - Complete bi-weekly journal reflections

Appendix I

Mentee Participant Matching Form

Career Interest

Please indicate your top three career fields of interest

1.

2.

3.

Please indicate your top three personal values when considering career

1.

2.

3.

Appendix J

Mentor Participant Matching Form

Career Experience

Please indicate the career fields you've worked in

1.

2.

3.

4.

5.

Please indicate your top three personal values when considering career

1.

2.

3.

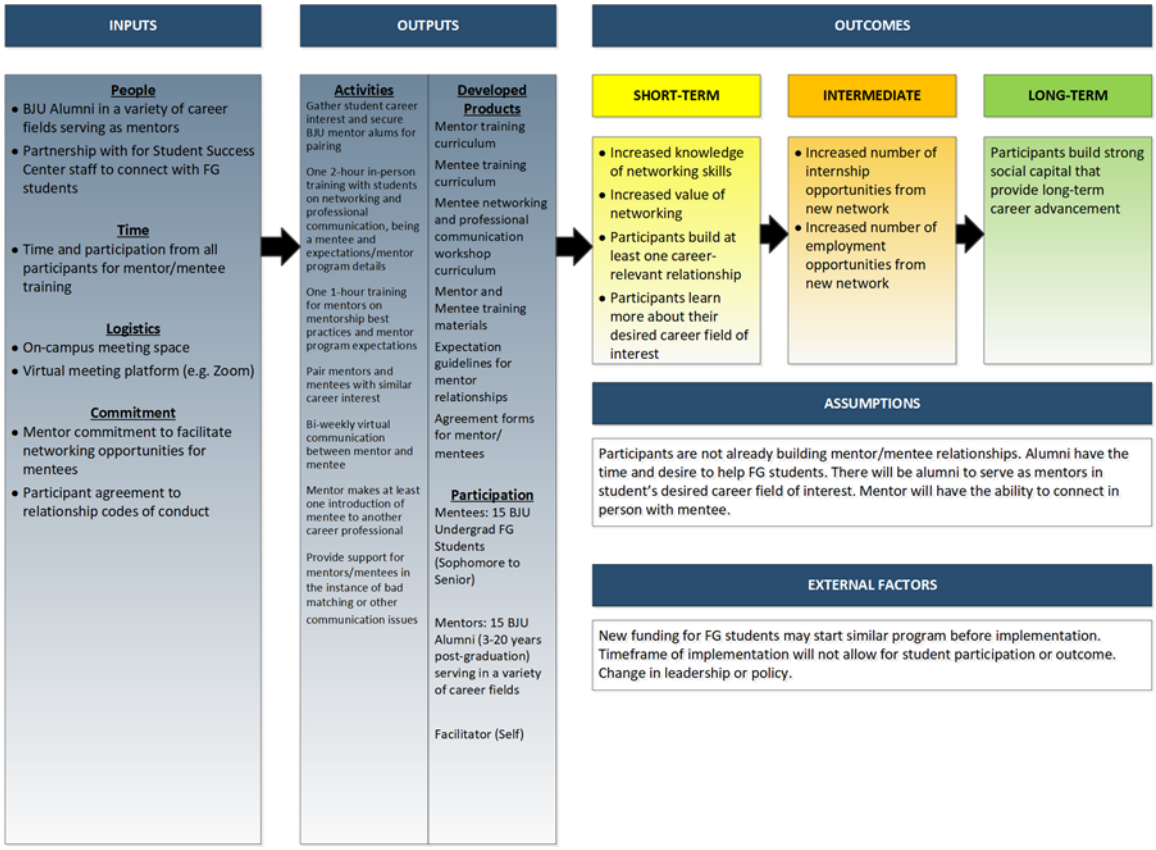
Appendix K

Focus Group Interview Questions

1. What is one thing you learned from the networking training that you did not know previously, but will use in the future?
2. How has the networking training impacted your comfort level with networking?
3. How would you explain your knowledge of social capital's value?
4. What challenges did you experience in interacting with your mentor?
5. What were some of the benefits you experienced in interactive with your mentor?
6. What connections did you make as a result of your mentoring relationship?
7. How has your perspective of networking changed as a result of your relationship with your mentor?
8. How has the relationship with your mentor influenced your comfort level with networking?

Appendix L

Logic Model



Appendix M

Informed Consent-Alumni

JOHNS HOPKINS UNIVERSITY
HOMEWOOD INSTITUTIONAL REVIEW BOARD (HIRB)

RESEARCH PARTICIPANT INFORMED CONSENT FORM

Study Title: Mobilizing Social Capital: An Exploration into the Use of a Mentorship Intervention to Enhance Social Capital for First Generation College Students

Application No.: HIRB00009387

Principal Investigator: Marcy Marinelli, PhD, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu

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You are being asked to join a research study. Participation in this study is voluntary. Even if you decide to join now, you can change your mind later.

1. Research Summary (Key Information):

The information in this section is intended to be an introduction to the study only. Complete details of the study are listed in the sections below. If you are considering participation in the study, the entire document should be discussed with you before you make your final decision. You can ask questions about the study now and at any time in the future.

2. Why is this research being done?

This research is being done to review a career mentoring intervention for first generation college students. The study will pair up first generation college students and mentors in aligned fields of interest. The mentoring pairs will meet on a biweekly basis between the fall and intersession semesters (November to early-January) and explore topics related to career development, networking, and career success. The goal of the research is to understand how mentoring can build social capital for first generation students.

People who are Hopkins alumni between 4 and 20 years post-graduation, working in fields aligned to student interest may join.

We anticipate that about 45 people (30 students and 15 alumni)people will take part in this study.

3. What will happen if you join this study?

If you agree to be in this study, we will ask you to do the following things:

- Sign a Mentor Code of Conduct form.
- Complete a pre-study survey that asks about you career experience and values.

- Participate in one, 1-hour training session on social capital, mentorship, conversation topics for engaging student mentees, and program expectations.
- Communicate bi-weekly with your mentee through the duration of the study (phone or virtual meeting).
- Complete a brief online journal reflection after each interaction with your student mentee.
- Virtually connect (via email) your student mentee with at least one additional professional contact related to the student's career field of interest.

How long will you be in the study?
You will be in this study for approximately 10 weeks (November to early-January).

4. What are the risks or discomforts of the study?
The risks associated with participation in this study are no greater than those encountered in daily life.

5. Are there benefits to being in the study?
You may or may not benefit from being in this study. This study may benefit the participant if their mentorship relationship leads to a professional connection that provides a qualified candidate for an internship or employment opportunity.

6. What are your options if you do not want to be in the study?
Your participation in this study is entirely voluntary. You choose whether to participate. If you choose not to participate, other mentoring options are available through connecting with students online via JHU's alumni relations portal-GoHopOnline.

If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

7. Will it cost you anything to be in this study?
No

8. Will you be paid if you join this study?
No

9. Can you leave the study early?
If you want to withdraw from the study, please email Alayna Hayes at alayna.hayes @jhu.edu or call (410) 350-5841 of your desire to withdraw.

10. Why might we take you out of the study early?
You may be taken out of the study if:

- You fail to follow instructions, specifically the Mentor Code of Conduct.

If you are taken out of the study early, Johns Hopkins may use or give out your information that it has already collected if the information is needed for this study or any follow-up activities.

11. How will the confidentiality of your biospecimens and/or data be protected?

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done

properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Study records will kept virtually through a password protected, cloud file management system. Additionally, participants names will be replaced by code identifiers on data sheets.

12. What other things should you know about this research study?

What is the Institutional Review Board (IRB) and how does it protect you?
This study has been reviewed by an Institutional Review Board (IRB), a group of people that reviews human research studies. The IRB can help you if you have questions about your rights as a research participant or if you have other questions, concerns or complaints about this research study. You may contact the IRB at 410-516-6580 or hirb@jhu.edu.

What should you do if you have questions about the study?
You can ask questions about this research study now or at any time during the study, by talking to the researcher(s) working with you or by emailing:
Dr. Marcy Marinelli, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu
Alayna Hayes, Doctorate student at JHU School of Education, alayna.hayes@jhu.edu, or calling (410) 350-5841
If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

13. What does your signature on this consent form mean?

Your signature on this form means that: You understand the information given to you in this form, you accept the provisions in the form, and you agree to join the study. You will not give up any legal rights by signing this consent form.

WE WILL GIVE YOU A COPY OF THIS SIGNED AND DATED CONSENT FORM

Signature of Participant	(Print Name)	Date/Time
Signature of Person Obtaining Consent	(Print Name)	Date/Time

NOTE: A COPY OF THE SIGNED, DATED CONSENT FORM MUST BE KEPT BY THE PRINCIPAL INVESTIGATOR; A COPY MUST BE GIVEN TO THE PARTICIPANT.

Informed Consent-Comparison Group

JOHNS HOPKINS UNIVERSITY
HOMEWOOD INSTITUTIONAL REVIEW BOARD (HIRB)

RESEARCH PARTICIPANT INFORMED CONSENT FORM

Study Title: Mobilizing Social Capital: An Exploration into the Use of a Mentorship Intervention to Enhance Social Capital for First Generation College Students

Application No.: HIRB00009387

Principal Investigator: Marcy Marinelli, PhD, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu

You are being asked to join a research study. Participation in this study is voluntary. Even if you decide to join now, you can change your mind later.

1. Research Summary (Key Information):

The information in this section is intended to be an introduction to the study only. Complete details of the study are listed in the sections below. If you are considering participation in the study, the entire document should be discussed with you before you make your final decision. You can ask questions about the study now and at any time in the future.

2. Why is this research being done?

This research is being done to review a career mentoring intervention for first generation college students. The goal of the research is to understand how mentoring can build social capital for first generation students.

People who are current Hopkins students between sophomore to senior year who identify as first-generation (neither parent has a 4 year degree) students may join.

We anticipate that approximately 45 people (30 students and 15 alumni) will participate in this study.

3. What will happen if you join this study?

If you agree to be in this study, we will ask you to do the following things:

- Complete a pre-study instrument that shares their current network's career fields. The network instrument will take approximately 15 minutes to complete.

How long will you be in the study?

You will be in this study for the period required to complete the pre-study instrument.

4. What are the risks or discomforts of the study?

The risks associated with participation in this study are no greater than those encountered in daily life.

5. Are there benefits to being in the study?

There is no direct benefit to you from being in this study.

6. What are your options if you do not want to be in the study?

Your participation in this study is entirely voluntary. You choose whether to participate.
If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.
If you do not join, your education at Johns Hopkins will not be affected.

7. Will it cost you anything to be in this study?

No

8. Will you be paid if you join this study?

No.

9. Can you leave the study early?

- You can agree to be in the study now and change your mind later, without any penalty or loss of benefits.
- If you wish to stop, please tell us right away.
- If you want to withdraw from the study, please [explain what the participant should do to withdraw].
- Leaving this study early will not affect your education.

10. Why might we take you out of the study early?

You may be taken out of the study if:

- You are no longer a current student.

If you are taken out of the study early, Johns Hopkins may use or give out your information that it has already collected if the information is needed for this study or any follow-up activities.

11. How will the confidentiality of your biospecimens and/or data be protected?

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Study records will kept virtually through a password protected, cloud file management system. Additionally, participants names will be replaced by code identifiers on data sheets.

12. What other things should you know about this research study?

What is the Institutional Review Board (IRB) and how does it protect you?

This study has been reviewed by an Institutional Review Board (IRB), a group of people that reviews human research studies. The IRB can help you if you have questions about your rights as a research participant or if you have other questions, concerns or complaints about this research study. You may contact the IRB at 410-516-6580 or hirb@jhu.edu.

What should you do if you have questions about the study?
You can ask questions about this research study now or at any time during the study, by talking to the researcher(s) working with you or by emailing:
Dr. Marcy Marinelli, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu
Alayna Hayes, Doctorate student at JHU School of Education, alayna.hayes@jhu.edu, or calling (410) 350-5841
If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

13. What does your signature on this consent form mean?

Your signature on this form means that: You understand the information given to you in this form, you accept the provisions in the form, and you agree to join the study. You will not give up any legal rights by signing this consent form.

WE WILL GIVE YOU A COPY OF THIS SIGNED AND DATED CONSENT FORM

Signature of Participant	(Print Name)	Date/Time
Signature of Person Obtaining Consent	(Print Name)	Date/Time

NOTE: A COPY OF THE SIGNED, DATED CONSENT FORM MUST BE KEPT BY THE PRINCIPAL INVESTIGATOR; A COPY MUST BE GIVEN TO THE PARTICIPANT.

Informed Consent-Treatment Group

JOHNS HOPKINS UNIVERSITY
HOMEWOOD INSTITUTIONAL REVIEW BOARD (HIRB)

RESEARCH PARTICIPANT INFORMED CONSENT FORM

Study Title: Mobilizing Social Capital: An Exploration into the Use of a Mentorship Intervention to Enhance Social Capital for First Generation College Students

Application No.: HIRB00009387

Principal Investigator: Marcy Marinelli, PhD, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu

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1. Research Summary (Key Information):
The information in this section is intended to be an introduction to the study only. Complete details of the study are listed in the sections below. If you are considering participation in the study, the entire document should be discussed with you before you make your final decision. You can ask questions about the study now and at any time in the future.

2. Why is this research being done?
This research is being done to review a career mentoring intervention for first generation college students. The study will pair up first generation college students and mentors in aligned fields of interest. The mentoring pairs will meet on a biweekly basis between the fall and intersession semesters (November to early-January) and explore topics related to career development, networking, and career success. The goal of the research is to understand how mentoring can build social capital for first generation students.
People who are current Hopkins students between sophomore to senior year who identify as first-generation (neither parent has a 4 year degree) students may join.

We anticipate that about 45 people (30 students and 15 alumni)people will take part in this study.

3. What will happen if you join this study?
If you agree to be in this study, we will ask you to do the following things:

- Complete a pre-study questionnaire that provides their career interest and career values. Additionally, each student will complete an instrument that shares their current network's career fields. The questionnaire and network instrument will take approximately 20 minutes to complete.
- Participate in one 2-hour training sessions, on social capital, networking, mentorship relationships and expectations.

- Communicate bi-weekly with their mentor through the duration of the study (phone or virtual meeting). Each conversation will last at least approximately 20 minutes.
- Complete an online journal reflection after each interaction with the alumni mentor.
- Participate in a 45-minute audio recorded focus group that captures their reflections on their mentorship experience.

Photographs/Video recordings:
As part of this research, we are requesting your permission to create and use audio recordings. Any audio recordings will not be used for advertising or non-study related purposes.

You should know that:

- You may request that the audio recording be stopped at any time.
- If you agree to allow the audio recording and then change your mind, you may ask us to destroy that imaging/recording. If the imaging/recording has had all identifiers removed, we may not be able to do this.
- We will only use these audio recordings for the purposes of this research.
- The audio recording will be transcribed by an outside company that has agreed to keep all data confidential.

How long will you be in the study?
You will be in this study for approximately 10 weeks (November to early-January).

4. What are the risks or discomforts of the study?

The risks associated with participation in this study are no greater than those encountered in daily life.

5. Are there benefits to being in the study?

You may or may not benefit from being in this study. This study may benefit the participant if their mentorship relationship leads to a professional connection that provides an internship or employment opportunity.

6. What are your options if you do not want to be in the study?

Your participation in this study is entirely voluntary. You choose whether to participate. If you choose not to participate, other mentoring options are available through connecting with alumni online via JHU's alumni relations portal-GoHopOnline.

If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

If you do not join, your education at Johns Hopkins will not be affected.

7. Will it cost you anything to be in this study?

No

8. Will you be paid if you join this study?

No.

9. Can you leave the study early?

If you want to withdraw from the study, please email Alayna Hayes at alayna.hayes @jhu.edu or call (410) 350-5841 of your desire to withdraw. Leaving this study early will not affect your education.

10. Why might we take you out of the study early?

You may be taken out of the study if:

- You are no longer a current student

If you are taken out of the study early, Johns Hopkins may use or give out your information that it has already collected if the information is needed for this study or any follow-up activities.

11. How will the confidentiality of your biospecimens and/or data be protected?

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Study records will kept virtually through a password protected, cloud file management system. Additionally, participants names will be replaced by code identifiers on data sheets.

12. What other things should you know about this research study?

What is the Institutional Review Board (IRB) and how does it protect you?
This study has been reviewed by an Institutional Review Board (IRB), a group of people that reviews human research studies. The IRB can help you if you have questions about your rights as a research participant or if you have other questions, concerns or complaints about this research study. You may contact the IRB at 410-516-6580 or hirb@jhu.edu.

What should you do if you have questions about the study?
You can ask questions about this research study now or at any time during the study, by talking to the researcher(s) working with you or by emailing:
Dr. Marcy Marinelli, Advisor at JHU School of Education and Principal Investigator, mmarine2@jhu.edu
Alayna Hayes, Doctorate student at JHU School of Education, alayna.hayes@jhu.edu, or calling (410) 350-5841
If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

13. What does your signature on this consent form mean?

Your signature on this form means that: You understand the information given to you in this form, you accept the provisions in the form, and you agree to join the study. You will not give up any legal rights by signing this consent form.

WE WILL GIVE YOU A COPY OF THIS SIGNED AND DATED CONSENT FORM

Signature of Participant	(Print Name)	Date/Time
Signature of Person Obtaining Consent	(Print Name)	Date/Time

NOTE: A COPY OF THE SIGNED, DATED CONSENT FORM MUST BE KEPT BY THE PRINCIPAL INVESTIGATOR; A COPY MUST BE GIVEN TO THE PARTICIPANT.

Appendix N

Recruitment Announcement

Individuals, sophomores to seniors (age 18 and older) who are first-generation college students (neither parent has attained a four-year college degree) are needed to participate in a research study on social capital. Participation may include some or all of the following: completing a career-interest survey, mentor pairing, and bi-weekly communication with a mentor.

If interested in participating, contact the Alayna Hayes via email: alayna.hayes@jhu.edu. Interest in study participation does not guarantee selection for study inclusion.

Dr. Marcy Marinelli, Principal Investigator, Johns Hopkins University School of Education

HIRB00009387

Appendix O

Student Recruitment Email

My name is Alayna Hayes and I am a third-year doctorate student from the School of Education at Johns Hopkins University. I am also an employee of Johns Hopkins University in the Life Design Lab. I am writing to invite you to participate in my research study about first-generation college students and social capital. You're eligible to be in this study because you are a current student at Johns Hopkins University (sophomore to senior year), and have self-identified as a first-generation college student. I obtained your contact information from Dr. Irene Ferguson.

If you decide to participate in this study, you may be asked to do some or all of the following: complete a questionnaire based on your interest in careers and your current network; attend training on social capital and networking; be paired with an alumni mentor in your career field of interest; submit brief reflections on your engagements with your mentor. Additionally, you may be asked to participate in an audio recording during a focus group interview at the culmination of the study.

Your participation in the above activities will be designated at random based on the number of interested participants. We will use your study experiences to better understand what resources may be helpful for first-generation college students as they prepare for their careers.

You are invited to attend a 30 min. virtual information session about the study on February 5th at 7 pm. The session will be recorded and shared if you are unable to attend but want more information. You can access the session with the following link/call-in information:

https://jh.zoom.us/j/734679189?pwd=ZW5XZWkwVGE3RDdkVTViT1B2L2FYdz09

(via web)

+1 646 876 9923 (Or via phone)

Meeting ID: 734 679 189

Password: 632194

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at alayna.hayes@jhu.edu or call (410) 350-5841.

Thank you very much.

Sincerely,

Alayna Hayes

JHU School of Education Doctoral Student, 2017 Cohort

Appendix P

Interested Student Email Response

Hi ,

Thank you for interest. I am securing up to 30 student participants for a mentoring study about social capital. Interested individuals will be chosen at random for participation in one of two groups. One group will complete a 10 min. survey. Another group will complete the 10 min. survey, participate in a workshop, and be connected with an alumni mentor. This group will also participate in a focus group upon completion of the study.

I will be hosting a 30 minute virtual information session on Wednesday, February 5th at 7 pm. The session will also be recorded for later viewing if you are unable to attend. The link/call-in for the session is below. I hope you will attend the informational session. If after watching the session you would like to participate please let me know.

The log-in information for the session is:

Topic: Student Participation Information Session

Time: Feb 5, 2020 07:00 PM Eastern Time (US and Canada)

https://jh.zoom.us/j/734679189?pwd=ZW5XZWkwVGE3RDdkVTViT1B2L2FYdz09

+1 646 876 9923

Meeting ID: 734 679 189

Password: 632194

Best,

Alayna

Appendix Q

View Recording Invite

Dear «NameFirst»,

If you were unable to participate in last night's information session regarding my study, please watch this **10 min. recording** (speaking starts at the 3:30 mark). Here: https://jh.zoom.us/rec/share/2MxZM-2s3H1IXJ3t7GPYBK8oO6XHaaa82yNIrPUFyE7DjwAfYH43-gZnCtRRVmeV

If after listening you would like to participate, please email me at alayna.hayes@jhu.edu with the following information:

1. Date of Birth (Must be 18 years of age or older)
2. Class Year (Must be between Sophomore and Senior year)
3. Confirm that you are First-Generation College Student
4. Confirm that you are not enrolled in any other career related mentoring program

Recruitment for the study will close on **February 10th**. ***You must indicate your interest in participating by February 10th***. *I will notify the selected participants about their participation by February 12th.*

Thank you again for considering participating.

Best,

Alayna Hayes

2017 EdD Cohort, Johns Hopkins University School of Education

Appendix R

Alumni Recruitment Email

Dear X,
My colleague, Alayna Hayes, a 3rd year doctorate student at JHU School of Education, is looking to secure mentors for her dissertation study. The study is focused on social capital and is evaluating how mentoring and connections fosters enhancement of social capital among students. She is looking to pair a mentor with each of the students (7 total) in her study. The mentors will be matched based on career interest and personal values. Each mentor will be asked to do the following:

- Sign a consent form and a code of conduct form
- Participate (or watch) a 45 min. virtual training with me on how to connect with their mentee
- Connect with the mentee virtually for 15-20 min (via phone/zoom/etc.) bi-weekly for approximately 4-5 times total
- Complete a 5 min. online data entry after each connection with their mentee

If you are interested or have additional questions-feel free to reach out to her via email alayna.hayes@jhu.edu or phone (410) 350-5841.

Appendix S

Participant Assignment Email

Hello,

You have been selected to participate in my intervention study. Your randomly selected group is GROUP B. Please sign and return the attached informed consent form to me by next **Wednesday (2/19).** You may submit the form to me electronically; drop the form in Wyman 2 West-Life Design Lab (Envelope at front desk of Life Design Lab); or meet me to give me the form.

Please note: The informed consent form has one update-the study will take place from **February to May** *not* November to January. The study duration is still 10 weeks as indicated on the form but, we have started the study later than initially planned.

Once you submit your form, I will send you a link for a survey to capture your career interest and availability for the mentorship training. Please submit your form as soon as possible.

Thank you for your willingness to participate and share your experience. If you have any questions do not hesitate to email me or call me (410) 350- 5841.

Best,
Alayna

Appendix T

Weekly Reflection Reminder Emails

I hope you are doing well in light of the recent changes on campus. I just wanted to make sure and provide the link for your reflections after interactions with your mentor. Take a few moments to fill it out after you have connected. Here is link:

https://forms.gle/ocpEnRV9M74wLKR36

Please let me know if you need anything else.
Best,
Alayna

I hope you are doing well. I just wanted to follow up and share the link again to complete your reflections if you have interacted with your mentee. You can complete the reflection by clicking this link: https://forms.gle/HQjJ8kaMJPLSUdrPA

Please let me know if you need anything moving forward. I appreciate your participation.

I hope that everyone is staying safe with the COVID-19 constraints!

Best,
Alayna

Appendix U

COVID Reflection Reminder Emails

Hi everyone,

I hope you are all doing well. While the welcome back from Spring Break is nontraditional given the space we're in, I hope that you are getting the resources and assistance you need to navigate the rest of the semester.

If you haven't done so recently, I encourage you to connect with your mentor. Though the environment is challenging right now, it is a great time to glean form your mentor's experience in navigating unchartered territory. They may have great insight to share!

If you do have the opportunity to connect, don't forget to complete your journal reflection via the link below:

https://forms.gle/soEnv8aXa5SQAhqn6

If you have any questions or I can be of assistance to you in anyway, don't hesitate to reach out.

Best,
Alayna

Hi everyone,

I hope you are all well in the midst of the COVID-19 issues. I know this can be a very challenging time and staying connected to your mentee may present to be even more difficult than usual.

With so much going on, I am confident that talking through the evolving environment may provide a great opportunity for you to share insight when you have time.

If you do have the ability to connect, or have done so recently, please don't forget to complete you journal reflection via the link below:

https://forms.gle/YEC3ehXauwrGYQsG7

If you have any questions or concerns don't hesitate to reach out. Take Care!

Best,
Alayna

Appendix V

Focus Group Transcript

Researcher: And I will pull of the questions. Okay and I'll also be taking some notes, but I'm just recording still as well. All right so first question is, um, what is one thing you learned from the networking training that we did, um, that you did not know previously, but will use in the future or even used when you were connecting um, with your mentor during um, the study period?

T1: I think for me, I learned how to like write out emails and having that work with people from our alumni network and how to write officially to not, don't take up a lot of their time while still communicating what like my, um, desires to communicate and reach out to them.

Researcher: Okay, great thank you.

T2: No, yeah, I definitely agree. I think just how to foster that initial connection that you could like then build on. I think it was really important because obviously that's like how every kind of relationship starts is in the first interaction and then it grows. And then with that your network grows.

Researcher: Mm-hmm (affirmative).

T3: And I think, um, knowing what questions to ask is very important too. I think, at least in my experience, uh, learning how to ask question in the networking uh, where shadow with it and then trans, transferring that to, um, my interaction with my mentor is, it's been very helpful.

Researcher: Great.

T2: I definitely agree with that sentiment. Just uh laughing.

Researcher: That having the questions like knowing what to ask was helpful.

T2: Yes it did.

Researcher: Great. Any other, um, anything else about what you learned, uh, within the training, um, that you didn't know before, anything else? Okay. Um, so next question is how has the networking training impacted your comfort level with networking?

T2: I definitely feel much more comfortable going out and like going on like LinkedIn and asking someone that has like a similar career path up for advice or just information with like how they got to where they did.

Researcher: Have you been able to do that at all, um, beyond your mentors since the training?

T2: So not directly from like LinkedIn, but I was connected through my mentor to someone else.

Researcher: Mm-hmm (affirmative).

T2: And so I guess that was kind of like that.

Researcher: Okay, great. Um, anyone else about how the networking training impacted your comfort level with networking?

T1: Well I think it's much easier now to just reach out to people, especially if they're, um, especially if there's like a connection between you two, whether that's like a mutual friend or like a mutual, um, like a school or like a past company that you guys know, interned at or worked at. So I feel like it's much easier to just send an email and most people won't like the worst thing that can happen is just they won't reply to you. So that's not even that bad.

Researcher: Mm-hmm (affirmative) okay.

T3: Oh, I do find myself doing a lot more networking, um, to a point where uh, I'm even comfortable connecting people together through email. And I think that that is something I never thought I could have done or would have, would have done.

Researcher: Mm-hmm (affirmative) so you've been the bridge for other people?

T3: Yes.

Researcher: Okay, great. Um, and then, uh, nothing else there. Um, how would you explain your knowledge of social capital's value, so what you get from it?

T3: Could you elaborate on that question a bit?

Researcher: Yeah so we talked about kind of what social capital was, um, in terms of, um, the, in the training, um, and talked about how, you know, it's the resources that develop through connections and relationships or potential relationships. And so, um, everyone, you know, after talking about that, I think everyone kind of had a good grasp of what social capital was. Can you speak now, I guess more about, um, the value of having social capital or maybe experiences that you've had as a result of, you know, connecting with a mentor, um, around, you know, maybe seeing the, uh, the value of social capital?

T2: Well, for one, at least for me was like, there's like, I thought I had a general idea of what like the career I was pursuing was about. But after like talking with a

mentor and just people that are directly involved in that industry, I like realized like it was something not, it wasn't like it was along the lines of what I was thinking, but it was much more in depth and much more elaborate and they were able to really like clear that up for me at least.

Researcher: Mm-hmm (affirmative) so the, the folks you talked to were able to kind of provide more understanding for you?

T2: Yeah.

Researcher: Okay.

T1: Uh, for me that was definitely the case as well. Um, like having a personal insight into like the career also apply with what to expect in their career field and then general advice on how to approach different things are coming such as like grad school or masters in something. But I also think that having like a social connection with these individuals can really connect you to like internships or like different things since they have, they do have a lot of connections with industry and they could send you referrals if there are openings into like directions to apply for summer programs or like different positions in the company after.

Researcher: Great.

T3: I do find, um, uh, I do find like my perception that that value very focusing on just how I can really learn, uh, from them. Uh, their understanding of, um, like say the grad school and master degree and the lives and how I can get to that point. The more, it's also more about like their understanding of their approach to life, their approach to career, how they deal with some very, um, specific thing uh, like productivity. Um, even we have a conversation about like how we deal with, you know, um, work in the time of crisis, how do we maintain the productivity. I think I learned a lot, uh, from my mentor and essentially that the social capital, um, but not necessarily on the intern part.

Researcher: Okay, great. Okay um, what challenges did you experience, if any, in interacting with your mentor?

T1: I don't think there were any for me at least not that I can think of.

Researcher: Okay. Anyone else?

T2: I don't know sometimes I just felt like I had to be asking questions just to like really like coming out, like to really use up my time efficiently and like get the most out of this experience and just like from connecting with someone. So sometimes I felt like it was more like me just kind of asking questions and then I'd like obviously get the answers, but it wasn't like really like a conversation. At least it was, at least in the beginning.

Researcher: Mm-hmm (affirmative) they had to do more to get from the conversation you're saying?

T2: Yeah.

Researcher: You were leading it?

T2: Mostly, but I feel like it was just because like my mentor obviously wanted a like address all any questions I had and obviously like we talked about like me personally and like it was, they ended up developing into a conversation and we can more natural, but definitely like early on it is much more like, like me asking you like questions about like, so what do you do? What's your company about? And like.

Researcher: Okay.

T3: I think, um, it's less of a challenge and more of an uncertainty I would say. Um, I'm not sure what to do in between the meeting. Um, in terms of like, do I keep reaching out to my mentor uh, on a like periodic basis or is it just a meeting to meeting? I'm not sure what the interaction outside of that meeting, would, would be like or, yeah.

Researcher: Okay, so between scheduled meetings, what are you supposed to do?

T3: Yeah, and it's usually just emailing back and forth, but should I you know, do other, things. And by some uncertainty I picture.

Researcher: Okay anything else? Um, if nothing else, and you all kind of captured some of them, but, um, what were some of the benefits you experienced in interacting with your mentor?

T2: They definitely offered help, like helpful advice and insight into the industry as well as how to get to where they are or where, how they got to where they are, which can help you get to a similar place in the future.

Researcher: Mm-hmm (affirmative).

T1: For me, my mentor provided a lot of direction on what people in my major usually do after graduation. So with that they provided potential um, ways in that from how, like from their original career path and how they push and the mindset they had while switching careers in different paths. And they also took a look at my resume and helped me work through a lot of that as well.

T2: Yeah. Kind of on the same note, I'm sorry. Um, I did, uh, we did work through my resume as well and we did like interview prep too, which is also helpful.

T3: Um, my experiences in my mentor, um, is not as I would say professional when we really... first we talk about grad school, but later on the topic that we talk about is more on, um, how do you approach life? Um, essentially how do you face parents? How do you deal with stress? How do you increase productivity? How do you approach difficulties? Have difficult conversation is it's more personal and more on the side of um, uh, less professional elements.

Researcher: But it, but that type of engagement, do you feel that that was a benefit to you? Like is that what you-

T3: Yes.

Researcher: We're hoping to get, okay.

T3: It was definitely a benefit, yeah.

Researcher: Okay. Any other benefits that you all experienced in interacting with your mentor?

T3: I think being able to learn the perspective and how a person, um, who, who's much older than I am experience a lot more how they approach different events in their life. It's very beneficial uh, to me in terms that now I can prepare for them and I know what it might be like in that sense.

Researcher: Mm-hmm (affirmative) great. Um, what connections did you make as a result of your mentoring relationships? So people that you were connected to, you don't have to say their names, but if you want to just talk a little bit about connections that were made.

T1: Well, for me, one of the persons that my mentor connected me with all works in intellectual property and then he said that I could reach out to him if I have any questions regarding like any of my future projects that concern like IP or like patent process. So I found that really helpful since like there's that, there's stuff you're gonna find online on this, these kinds of things, but it's just much helpful to get your questions answered in person. So definitely that's a great connection I thought that I made.

Researcher: and this is a person that you actually did talk to as well, or they introduced you. Can you tell me a little bit more about that?

T1: Mm-hmm (affirmative) yeah he introduced me and then he, um, emailed both of us and then he gave me his address and then I started corresponding with them over email.

Researcher: Okay, great.

T2: So I had a similar experience. So in the field of like chemical engineering you have like a lot of like different paths and different positions in companies. So the person I was connected to was more of like the engineering, like process design and I was, when talking with her, I kind of said I was kind of more interested in like developing like drugs or like antibodies. And so she was able to connect me with someone in that aspect of it. It was in the same company but she was able to connect. And so we went, we had a phone call the other day and we kind of just talked about how they're different and how the expectations are different for each sector. And mostly just like the same stuff just now. I talked about with my original mentor just now with someone else and, and how he's, um, how he's like adapting to everything and how he adapted to his career.

Researcher: And is this someone that you would anticipate staying connected with in the future or um.

T2: For sure if I have any questions like he, he said that if I have any questions I can just ask him. So definitely if I have anything in that field, I'll ask him.

Researcher: Okay, great.

T3: Um, my mentor hasn't introduce me to any specific network that, um, when I told her about like the people I want to reach out to, she went through great strain telling me how to do it. Finding the contacts and all the other stuff, yeah.

Researcher: And um, were you able then to reach out to those individuals? Did you feel comfortable doing that based on what she shared or, um.

T3: Yes.

Researcher: Okay.

T3: I was able to get replies too.

Researcher: Oh great.

T3: And schedule meetings.

Researcher: Great how many um, of those individuals would you say you reached out to?

T3: Um, I reached out to, the people I think I replied to, I got two replies that was it.

Researcher: Okay.

T3: I reached out to a lot of people.

Researcher: But these weren't people that she actually knew.

T3: Uh, they weren't yeah.

Researcher: Okay.

T3: It is tricky because my mentor isn't, um, specifically in the field that I'm looking forward to, but she does have contacts, um, of like various, like relative fields. Yeah, relevant fields.

Researcher: Great. So, um, for each of you, how many would you say additional connections, whether it be someone that your mentor connected you to or folks that you reached out to based on your mentor signa- suggestion, how many additional people would you say um, you have gotten in touch with, through the through the mentoring.

T1: I think two for me.

Researcher: Okay.

T2: Mine was just one, but I will definitely like continue. Like if I ever need any other like advice from anyone I can... now I know how to like do it and I definitely could ask these. I could like expand my network through my network.

T3: I would say the same and but so far is a two person, two people.

Researcher: Uh, last two questions. How has your, um, okay... How has your perspective of networking changed as a result of your relationship with your mentor?

T2: It's definitely something I'm much more willing to do now, but because I'm more so like experienced in doing it. But I also see like the direct benefits of talking to people in the industry and just getting their firsthand experiences.

T1: For me, I don't know if it's the case for everyone out there, but at least from my mentor, maybe it's from the program, but it seems like that they were very interested in helping me advance my career and giving me like solid advice and actually caring about like the future. So, um, it seems like a lot of people that you actually reach out to, especially alumni from your school are very willing to give you advice and tell you how they got to where they are based on like their time after graduation.

T3: I really resonate with that. I'll say the same. Um, I realized how, uh, helpful people would like to be and how people could, could be uh, very willing to help you. And that makes me more comfortable to reach out to people.

Researcher: As you know, that they're willing to help.

T3: Yeah.

Researcher: Anything else about changes or, um, thoughts in your perspective on, um, networking?

T3: I think one of the insight I got from both my mentor and my experience is that, um, networking isn't only about, um, bridging myself with other people, but also bridging people together. And in that way, it's also a form of networking that is very beneficial to all sides.

Researcher: Okay. Um, and then last question, um, all of the mentoring was virtual obviously. Um, did you feel that that had an impact at all on your ability to connect with your mentor? Um, being a hundred percent virtual.

T1: Oh, I think it was fine because my mentor wasn't near campus anyways, so I think all our interactions would have been online, but I think we got all the content that we would have gotten in person through online. So I don't think that made a huge difference.

T2: I agree. I think like I got all the information I like would have gotten if it was in person, but I definitely think like a physical element, like being able to like go in and see exactly what they do and maybe like shadow them would have offered a different perspective as well. So I don't think I like lost anything from not having it be like a in-person kind of thing. But I definitely think it would have added if it like it was.

T1: Mm-hmm (affirmative).

T3: And adding on to that I do think in person is more beneficial in terms of um, the, there's more interaction and obviously cannot also shadow the, your mentor can show you a lot more things. Being online, uh, conveys the sense of like convenience. Um, last week my mentor call me after a run. So it's one of those things where it's more, even though it's we are in a pandemic right now, but just in the normal circumstances, it could be more convenient to have a virtual meeting because you don't have to schedule time and travel to a place to meet.

Researcher: Mm-hmm (affirmative) okay. Um, any last thoughts or perspectives that I didn't specifically ask you but you would just kind of like to share about your experience about, um, your mentor, about, um, networking anything, any last thoughts?

T2: Well, I definitely think it was a beneficial experience. Like I don't know if I would have ever been like without something like this, I don't think I ever would have gone out maybe network on myself, by myself. So I think it was good to have like an introduction on how to do it. It made me more comfortable and willing to do it.

Researcher: Great, anyone else?

T1: Yeah, I thought it was a great experience as well and definitely networking. I think if it was more accessible for more people and more people would do it, but like it's hard to find the right people to talk to and for them to actually reach out to you without someone connecting you or like having a network to reach out to. So definitely I think this program was great and um, maybe in the future like maybe our whole school can provide something else to connect, especially people with their major I think really would be beneficial. But yeah, I think, I just think it was a great program overall.

T3: And I think that, um, as for, um, the students sides or, and the mentors sides, if there's a, I would say a more, um, a suggestion guideline to what you could do, what you could ask for like maybe like a PDF that people can refer to. That might also be great.

Researcher: You're saying for the student or for the mentor or both?

T3: Uh, it could be both.

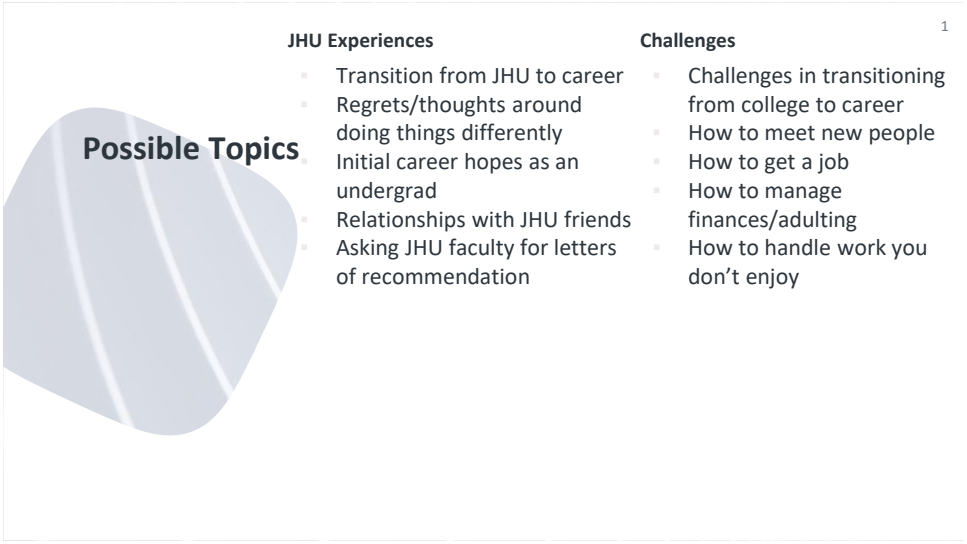
Researcher: Okay.

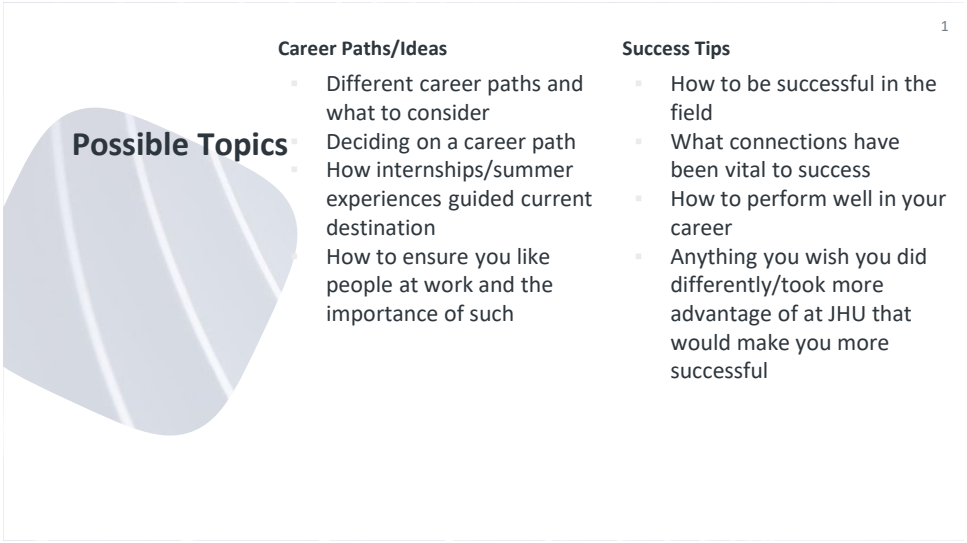
T3: But overall it is an amazing experience and I'm grateful for my mentor and she help me out a lot.

Researcher: Anything else? All right. Well, thank you so much, um, for the chat today, but just also more broadly, your experience and your, you know, your participation overall. I'm so appreciate your commitment to this even during everything that's going on. And I'm glad to hear that it did provide, um, a good experience for you. So thankful for that. Um, just some last, and actually I'll just stop recording really quickly. Um, so just some last, oh, I pressed stop okay.

Appendix W

Conversation Topics





Possible Topics

Interview Prep

- What type of technical skills are needed
- How to prepare for interviews

Resume/Cover Letter

- What would a good cover letter look like
- Provide resume feedback

Curriculum Vitae

Alayna Hayes

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EDUCATION

JOHNS HOPKINS UNIVERSITY Baltimore, MD
EdD, Entrepreneurial Leadership Expected July 2020
Cumulative GPA 3.86
Dissertation Topic: "Mobilizing Social Capital: An Exploration Into the Use of a Mentorship Intervention to Enhance Social Capital for First-Generation College Students"

FLORIDA A&M UNIVERSITY Tallahassee, FL
Masters of Business Administration, Concentration: Marketing
Bachelors of Science: Management, *Cum Laude*

LEADERSHIP TRAINING

NACE-Management Leadership Institute 2018
Carey Business School Executive Education
Persuasive Communication 2019
Leadership in Action 2018
Budgeting and Strategic Performance Management 2018

PROFESSIONAL EXPERIENCE

JOHNS HOPKINS UNIVERSITY Baltimore, MD
Johns Hopkins University is a highly selective, private, research university with over 5,000 undergraduate students and approximately 20,000 graduate students.

Senior Director of Life Design-Diversity, Equity & Inclusion Nov. 2019-Current

- Leading newly created SOAR (Seizing Opportunities Access and Relationships) team through historic Michael Bloomberg gift to support FLI/URM students in co-curricular departments (Athletics, First-Year Experience, Student Leadership and Involvement, Center for Student Success, Center for Diversity & Inclusion). Dual reporting to Vice Provost of Integrative Learning & Life Design and Life Design Lab Executive Director.
- Hiring and managing a staff of six team members; providing onboarding, tactical advice, support, and career development plans.
- Building strategy focused on scalability and access to support First-Generation, Limited Income, and URM students through immersive experiences and mentoring relationships; strong focus on scalability in programming and Life Design framework. Under leadership team has engaged over 50% of URM and FLI undergraduate students in first semester AY20.
- Created funding opportunities focused on supporting FLI student participation in transformative immersive experiences including shadowing, internships, academic and industry conference attendance, etc.

Director, Life Design Lab-Whiting School of Engineering July 2019-Nov. 2019

- Hired and managed a staff of four team members; provided onboarding, tactical advice, support, and career development plans.

- Led the Life Design Lab (LDL) through organizational change as co-director in the absence of Executive Director.

- Led the Whiting School of Engineering (WSE) team in creating and implementing nested plans for academic departments to support students and alumni.

- Built and implemented development plans for cross training staff in newly designed Life Design Educator roles.

- Led the transition of LDL into the new Student Service Center location. Partnered with JHU leadership and Financial Aid to determine the most effective working arrangement.

- Implemented new, highly focused internship program for BME department; goal of 100 internships for AY20.

Director, Employer Relations **(Homewood Career Center)** April 2018- July 2019

- Managed a staff of seven team members; providing onboarding, tactical advice, coaching support, and career development plans.

- Awarded Homewood Student Affairs "High Impact Award" for exhibiting skills, behaviors, and innovation that makes an impact in student lives and the colleagues that serve them.

- Led team through 8 intersession treks including 4 new treks in AY19.

- Directed expansion of InBaltimore Internship Program from 3 to 13 internships in AY19.

- Oversaw implementation of new Sophomore Shadow Program, engaging alumni and parents in experiential learning shadow opportunities for Sophomore students.

- Served as co-director of the Career Center in the absence of Executive Director.

- Facilitated Identity and Inclusion Workshops for First-Year students through the school year with campus colleagues fostering an environment that values diversity and inclusion.

- Led the Career Center through significant organizational change to a new Life Design Framework.

- Served on SSEI-Employer Relations working group as Homewood representative providing insight into employer development and organization strategy.

Interim Director, Employer Relations Aug. 2017-April 2018

- Managed a staff of three team members; providing onboarding, tactical advice, coaching support, and career development plans.

- Created and executed *Career Week* through delegation and support from staff; including a successful first-time event, Resumania Plus, with over 200 students in attendance.

- Led employer relations team in increasing Fall Career Fair employer attendance by 8%.

- Identified improvement areas for Fall Career Fair and led implementation of several new ideas, including student early access, networking breakfast, and Career Fairs Plus app.

- Maintain strong partnerships with colleagues in development, alumni relations, and CSS through monthly touch base meetings, staff meeting attendance, and respective initiative support.

- Collaborate with the Director of Student Career Development, to meet employers' recruitment needs through career readiness of students.

Assistant Director, Employer Relations April 2016-Aug. 2017

- Discover new employers and build strong partnerships contributing to near 5% increase in on-campus interviewing and 34% increase in on-campus employer information sessions.

- Planned and executed majority of FY17 Finance and Government Academy Weeks through partnering with alumni and employers; served 160 students and 175 students for each academy, respectively.

- Identified and implemented the use of *Wall St. Prep*, a finance learning platform to support and educate students interested in working in finance; 56 users with over 150 hours of training within the first year.

- Created the first iteration of student Dream Employer Survey, a tool to capture student's employers of interest.

ROYAL CANIN Washington, DC

Royal Canin, owned by MARS, is a 1Billion dollar global companion animal nutrition company that produces tailored, veterinary prescribed diet options for dogs and cats.

District Sales Manager Aug. 2013- April 2016

- Implement sales strategies within veterinary hospitals to grow existing business and vacant territories, solicit new opportunities and penetrate new products for use among feline and canine veterinary patients.

- Provide customer service and various soft skills training to hospital administrative and technical staff.

- Achieved 100% of goal for first quarterly product focus while balancing training and new territory requirements.

GLAXOSMITHKLINE (GSK) Baltimore, MD

GSK is a 30Billion dollar global pharmaceutical company producing prescription pharmaceuticals and over-the-counter goods.

Oral Healthcare Consultant Jan. 2011- Aug. 2013

- Promoted, educated, and strategically sampled GSK Consumer Oral Healthcare Products (Sensodyne, Pronamel, Biotene, Polident, Poligrip, and Aquafresh) to private dental practices, dental hygiene schools, and local study clubs/organizations.

- Assisted in planning GSK involvement and recruiting at National Black MBA Association (NBMBAA) candidates at the conference career fair; offered developmental feedback and professional guidance to each candidate regardless of current employment potential.

- Researched and attended bi-quarterly conferences, tradeshows, and study clubs to maximize relationship-building opportunities among a variety of industry leaders.

ZOETIS (FORMERLY PFIZER ANIMAL HEALTH) Bethesda, MD
Detroit, MI

Zoetis, a subsidiary of Pfizer, is a 5Billion dollar company and the world's largest producer of medicine and vaccinations for pets and livestock.

Associate Therapeutic Specialist Jan. 2005- March 2010

- Educated veterinary professionals on the features and benefits of Pfizer anti-infectives and parasiticides. Successfully launched two new products and communicated the advantages of Pfizer product over the competitor. Produced over $1 million in annual sales in vast 100 account sales territory.

- Increased portfolio sales by 200% by implementing company provided marketing initiatives and creating new marketing strategies, including product focused open houses, utilizing industry key opinion leaders, and identifying knowledge gaps among practitioners.

- Innovative approaches to sales that reversed stagnant growth of ten-year mature brand through patient file audits, unrealized profit calculators, and appointing in-office product champions.

FACULTY AND TEACHING EXPERIENCE

Instructor **Coming Fall 2020**

JOHNS HOPKINS UNIVERSITY
Baltimore, MD

- *Arrive and Thrive First Year Course*-Connecting first-year students with resources, skills, and tools for success in their transition to Johns Hopkins University.

Adjunct Faculty 2014
HOWARD COMMUNITY COLLEGE *Columbia, MD*

- *Business Development and Sales for Emerging Leaders*-Focused on enhancing sales strategies and techniques, including cold calling, building relationships, closing, and follow up.

- *Introduction to Business*–Overview of the basic departments and functions of businesses and their structure.

Adjunct Faculty 2012
COMMUNITY COLLEGE OF BALTIMORE COUNTY *Catonsville, MD*

- *How to Look Great*-Developed a course curriculum for the Continuing Education-Life Enrichment program; centered on the importance of a first impression through professional appearance.

Program Facilitator 2016
PRINCE GEORGES COMMUNITY COLLEGE *Largo, MD*

- *Youth @ Work Job Readiness Program*-Educate students ages 15-19 in career development and life skills training.

CONFERENCE PRESENTATIONS AND GUEST LECTURE EXPERIENCE

Presenter 2017
DC CAREER CONSORTIA *Washington, DC*

- *Building Brands: Gaining Student Interest Beyond "Heavy Hitters"*

Guest Lecturer 2017
JOHNS HOPKINS UNIVERSITY *Baltimore, MD*

- Career Ready Leadership: Leading at All Levels

Keynote Speaker 2014
SWEET PROSPECT BAPTIST CHURCH *Baltimore, MD*

- *Women's Career and Development Empowerment Seminar*–Shared information on job search strategies, interview preparation, and continued development once employed.

Guest Lecturer 2012
COMMUNITY COLLEGE OF BALTIMORE COUNTY *Catonsville, MD*

- *Speech 101: Fundamentals of Communication*-Presented on aspects of professionalism, including resume building, interview skills, and networking.